

JIWAJI UNIVERSITY, GWALIOR – 474011

School of Studies in Chemistry

Tender form no.

Name of the work : To supply **Gas Chromatograph**

Tender date for issue : 14.09.2010

Tender submission date : 23.09.2010

Tender opening date : 24.09.2010

Tender cost : Rs. 500/-

TERMS AND CONDITIONS OF JIWAJI UNIVERSITY, GWALIOR

Sealed tenders are invited for the supply of Gas Chromatograph. Tenders will be considered subject to following terms and conditions.

- 1) All tenders must be carefully accompanied by a Bank draft drawn in favor of Registrar, Jiwaji University, Gwalior for an amount mentioned (which is equivalent to the 3% of the approx. total cost) in the offer as earnest money. Tenders received without earnest money will be liable to be rejected and may not be considered.
- 2) Tenderers can obtain tender document against payment of Rs.500 by demand draft in favor of the Registrar, Jiwaji University, Gwalior on or before 23 September, 2010 on any working day between 11 A.M. to 5 P.M.
- 3) The last date for submitting the Tender is 23 September, 2010 before 5.30 P.M. at the office of the Registrar, Jiwaji University, Gwalior.
- 4) The tenderers should agree for furnishing a Bank Guarantee from Nationalized Bank up to 10% of the cost of equipment during the Warrantee Period and Period extendable to at least five years or as many as desirable by the University so as to ensure proper maintenance and satisfactory working of the equipment.
- 5) The tenders should agree to execute an agreement for proper supply, installation and satisfactory working of the equipment exactly to the specification mentioned.
- 6) The rates should be quoted in the units given in the enquiry and should be for supply for F.O.R. Gwalior. The prices should be inclusive of sales tax and other charges. The exact details of taxes should be given separately.
- 7) Being an Educational Institution, it is entitled to issue concessional sales tax certificate. No other sales tax form is issued. If concessional sales tax certificate is not acceptable to the supplier, the actual rates of sales tax to be charged must be clearly mentioned.
- 8) This institution is exempted from payment of Central Excise duty in terms of Govt. notification No. 1097-Central Excise Dated 01/03/1997. Necessary copy to be provided by the University.
- 9) For Imported equipment the price should be without any custom duty. The institution is registered with Department of Science and Industrial Research (DSIR) Govt. of India vide Government notification no 5196 custom dated 23.07.1996 is exempted from payment of the custom duty. Necessary certificate copy to be provided by the University.
- 10) If the rates are quoted Ex-Go down or F.O.R. Railway station of dispatch, then the tenders must also indicate charges towards packing & forwarding, railway freight etc. so as to compare these rates with those of others who have quoted FOR destination failing which such offer will be ignored.

- 11) Manufacturer name, their trademark and brand should invariably be mentioned in the tender and illustrated leaflets giving technical particulars/details etc. should be attached with the quotation to facilitate consideration of the offer.
- 12) The tender should quote their best willing price which should be firm for the period of 120 days from the due date of tender.
- 13) The minimum period of delivery of the material should be quoted. Ready stock offers will get preference.
- 14) The quantities of each item to be purchased may vary according to actual requirement at the time of placing order.
- 15) If there is any DGS & D rate contract of Government approved rates the same should be quoted enclosing the copy of Rate Contract, which will get preference.
- 16) The tender should avoid the use of vague terms such as 'extra as applicable' such tenders will be rejected.
- 17) Printed conditions on the back of the offer submitted will not be binding unless separately mentioned.
- 18) Quotations for each item (as per serial number in the specification sheet) along with terms and condition must be submitted separately in separate cover so that for individual item separate comparative statements should be prepared. This is very important.
- 19) Advance payment either direct or through bank will not be accepted in any case as per rule. Full payment will be made after receipt of material, inspection there of and after satisfactory installation and working of the entire equipment.
- 20) The successful tender if so required by the university, shall place a security deposit in cash or furnish Bank Guarantee from the Nationalized Bank up to 10% of the total value of the order which is refundable after satisfactory execution of order within the stipulated delivery period. The penalty of half percent per week shall be imposed by the university, subject to a minimum of 10%, for late delivery of the material. No interest shall be paid on Security Deposit or Earnest Money.
- 21) The tenderers should clearly state regarding charges for installation, maintenance etc. of the equipment if any.
- 22) Offers received not according to our terms & conditions and within the time prescribed shall be rejected. Delay due to postal services of any kind will not be considered for acceptance of the order.
- 23) In all matters of dispute, the decision of Registrar, Jiwaji University, Gwalior shall be final and binding on the tenderers.
- 24) The address of local office at Gwalior for maintenance along with the list of well-reputed organization who have purchased the same equipment should be provided.
- 25) List of spare parts must be supplied.

- 26) The test reports of the equipment quoted from reputed Government organization/ academic Institution must be submitted along with the offer.
- 27) In case of an authorized dealer, Certificate from manufacture must be attached as proof.
- 28) Preference will be given to the companies having service center at Gwalior. Companies with ISO- 9000 certificates will also be preference.
- 29) Date and time of opening of envelopes is 24 September, 2010 at 3:00 P.M. in the presence of intending tenders or their representatives who may like to present in the office of the Registrar, Jiwaji University, Gwalior.
- 30) If any of dates of receipt/opening of tender happen to be declared as holiday, the schedule will be shifted to the next working days automatically.
- 31) The tender envelop should contain two envelopes. First subscribed as Technical Bid for (the items). This should contain the specifications of the equipment and terms & conditions of supply and Earnest money. The Second envelop should be subscribed as Commercial Bid for (the items). The above two envelopes should be placed in one envelop and should be subscribed as Serial No..... vide No.# to be opened on 24 September, 2010 at 3:00 P.M. Only those who fulfill the technical specifications shall be considered for opening the commercial bid.
- 32) Canvassing for support in any form for the acceptance of any tender is strictly prohibited. Any Tenderer doing so will tender himself liable to penalties which may include removing of his Name from the register of approved Suppliers.
- 33) Separate tenders to be submitted for each item.
- 34) Tender should reach by speed post or Registered post. Tender sent by Courier, by hand, telegraphic, fax and conditional tenders shall not be accepted.
35. Any item or offer may increase in number or even might not be purchased without assigning any reason. The Registrar, Jiwaji University, Gwalior reserves the right to accept or reject any or all tenders without assigning any reason.

Important Note:

Quotation along with terms and condition must be submitted in duplicate separately in separate covers (with 3% Earnest Money through DD) so that for individual items separate comparative statements could be prepared.

TENDER SPECIFICATIONS FOR GAS CHROMATOGRAPH (GC)

Features of Gas Chromatograph

For education, quality control and research work.

Analysis of wide fields of organic and inorganic compounds such as gases, Liquids and solids.

Determination for qualitative and quantitative analysis of compounds

Functional keyboard with numeric digital display (set point and actual)

Power fail memory protection.

Eight heated zone.

Number of complete analytical GC methods which can be stored, saved, loaded and Clear by keyboard are Twenty. Max. GC Method Storage : 20

Microprocessor control system consists of column oven, injector, and detector.

Self testing, diagnostics on the display

Stopwatch function

Can be attached up to two detectors and two injectors.

Two detectors can be operated simultaneously (dual signal function).

Clock time programming

Constant Pressure Mode

Gas Chromatograph GC Mainframe

Usable volume: 14L or bigger

Automatic cooling under processor control

Temperature operating range: (4⁰C above ambient to 450⁰C or more)

i) With LN2 cryogenic cooling: -80⁰C to 450⁰C

ii) With CO2 cryogenic cooling: -55⁰C to 450⁰C

Set point entry: 1⁰C for temp. or more 0.1⁰C for program

Programming: Rates 0.1 to 50⁰C per min fifteen ramps, sixteen steps temperature program

Run time : Maximum 9,999 min

Cool down rate : About 6.5 minutes 450⁰C to 50⁰C

Temperature program method : 20

Thermal Stability : ±0.01

Function of oven temperature recalibration

INJECTOR

Capillary inlet

Maximum Temperature: 400°C

Pressure setting range : 0 ~ 100 ml/min

Total flow setting range : 0 ~ 200 ml/min N₂ 1 ~ 1000ml/min H₂ or He

Accessories: septum, liner, O-ring, graphite ferrule

Multi mode design includes split and split less injection split/splitless mode :
solenoid valve control 0.01 minute step

S/S jet for injector

DETECTOR

Flame Ionization Detector

450°C maximum operating temperature

Automatic flame ignition from the keyboard and Automotography Data System

Automatic FID ignition at mixing rate of 30:100(Air:H₂)

MDL : 3.2pg carbon/sec as dodecane using N₂ carrier

Linear dynamic range : <±10% over 1×10⁷ with N₂ carrier and 0.4572 mm jet

Sensitivity : 19 m Coulomb/sec

Individual Amplifier for FID

Chromatograph data system

Chromatography Processing Program:

Runs Windows 98 or 2000

Multi channel and multi tasking

Supports up to 4 channel, 4 data acquisition simultaneously

On-line HELP system

Maximum lengths for run identifiers; sample names : 32 characters, operator name
: 31 characters, comment : 127 characters

Zoom-in and zoom-out on specific data point at any time with mouse

Compatible with Autochro-WIN data

Transfer results to other software:creates Industry standard

ASCII-compatible report files for transfer to other software packages Report

Report tpes : area% report, height% report, ESTD report, ISTD report

Report list:peak number, retention time, peak type, area, peak width, height, area%,
height%, user input peak name, concentration

Quantitation type : Area%, Height%, External Standard, Internal standard

Instrument Cntrol and Data Acquisition

Data Acquisition from various GCs

GC Control standard

Remote Start/Stop

Start-up kit

Capillary column

Capillary Column DB-5 (30m x 0.25mm x 0.25 μ m)

Gas purification & control panel three stage for zero Air, N₂ & H₂ Gas

Indicating regeneratable Silica gel and Molecular sieves filters to remove the moisture

and traces of moisture from Zero Air, N₂ & H₂ by showing change in colour. Activated Charcoal filters to remove the hydrocarbons from air and hydrogen. Oxytrap filter to remove

Oxygen from carrier Nitrogen Gas line

Pressure Regulators

Pressure Gauges, Toggle Valves etc.

Optional Accessories

1. High Purity Gases with double stage regulators and license purchase for Air, N₂ and H₂.
2. Computer System CPU
3. UPS (Uninterrupted Power Supply) 3 KVA suitable for above