



NATIONAL INSTITUTE OF TECHNOLOGY

ROURKELA-769008 (ODISHA)

An Institute of National Importance under Ministry of Education, GOI

NOTICE INVITING TENDER

Tender Notification No: NITR/PW/FP/2020/213

Dated: 21/12/2020

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **Gas Chromatograph with all Accessories** at NIT Rourkela.

Last date of Submission of Bid : **11/01/2021 by 03:00 PM**

Opening date of techno-commercial Bid : **12/01/2021 at 03:00 PM**

For Details: http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx

Contact: Dr. Mohd Khalid Gul,
Department of Food Process Engineering,
Phone No.: 0661-246-2904/+91-7006397480
Email ID: gulmk@nitrkl.ac.in

Bidding through: <https://eprocure.gov.in/eprocure/app>

**Sd/-
REGISTRAR**



NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008, ODISHA

(OPEN TENDER NOTICE NO.: NITR/PW/FP/2020/213

Dated: 21/12/2020)

Procurement of Gas Chromatograph with all Accessories at NIT Rourkela

SL.NO	Description of Goods/Service	Quantity
1.	Gas Chromatograph with all Accessories	1 unit

- Quantity required : **As mentioned above (All information regarding technical specification provided in Detailed Technical Specification)**
- Delivery : Within **90 days** from the date of purchase order
- Last Date of submission of Bid : 11/01/2021 by 03:00 PM**
- Date of opening of techno-commercial bid : 12/01/2021 at 03:00 PM**
- The firm should not have been black listed at any time.
- The submission of following bids by the tenderer should be through <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines as per the portal.

Procurement of Gas Chromatograph equipment with all Accessories
(Open Tender Notice No.: NITR/PW/FP/2020/213 Dated: 21/12/2020)
Due on 11/01/2021 by 03:00 PM

- Liquidated damage clause** will be charged for any delay in supply of goods.
- The validity of the tender shall be **90 days** from the date of opening of the bids.
- Detailed advertisement including all tender documents is also available in our website at http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx .
- 10.** NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

(REGISTRAR)
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-2462021

DETAILED TECHNICAL SPECIFICATION

Specifications for Gas Chromatograph with all accessories:

Sealed tender bids are invited from reputed/authorized vendors/companies for Gas Chromatograph with following tender specifications.

Description	Qty
Gas Chromatograph, Performance Specifications <ul style="list-style-type: none"> • Typical retention time repeatability: <0.0008 min • Typical peak area repeatability: <0.5 % RSD Oven Specifications • Column oven (H × W × D): 27 × 27 × 17.7 cm; 12.9 L • Operating temperature range: ambient +3°C to 450°C • Cryogenic option minimum temperature: -100°C with liquid nitrogen; -50 with liquid CO2 • Temperature set point resolution: 0.1°C • Number of ramps/plateaus: 32/33 • Maximum heating rate: 125°C/min • Oven cool-down (22°C ambient): 450°C to 50°C in less than 4 min. • Ambient rejection: < 0.01 °C per 1 °C 	01
Maximum Heating Rate	
T Range °C	Heating Rate °C/min
50 to 70	125
70 to 115	100
115 to 175	80
175 to 300	50
300 to 450	35
IEC (Integrated Electronic Control) Gas Specification <ul style="list-style-type: none"> • Up to 18 channels of integrated electronic gas control • Pressure set points minimum increments: 0.01 kPa-0.001 psi in all ranges • Carrier Gas Control Common to all Injectors • Split ratio: Up to 12500:1 • Pressure range: 0–1000 kPa (0–145 psi) • Modes: Constant and programmed pressures and flows with gas saver and septum purge • Total flow setting: • Control of split flow in 1 mL/min from 0 to 1250 mL/min • Purge flow from 0 to 50 mL/min • Optional Instant Connect Auxiliary Gas Module • Maximum number installed: 2 • Allows for the control of three additional gas channels • Optional Instant Connect Auxiliary Temperature Module • Controls up to 2 additional temperature zones (e.g. cryo options or heated) 	
Detectors available: Flame Ionization Detector, Thermal Conductivity Detector, Electron Capture Detector, Nitrogen Phosphorus Detector, Flame Photometric Detector. <ul style="list-style-type: none"> • Available as Instant Connect, user-exchangeable modules • Maximum number installed: 3 including a mass spectrometers on the same oven, or 5 plus an MS when using the TRACE 1300 Auxiliary Oven • Fast data acquisition rate: up to 300Hz for FID, TCD, ECD, NPD and FPD 	
General Specifications <ul style="list-style-type: none"> • Heated zones: Up to 7 with 1300 GC, or up to 9 with the TRACE 1300 Auxiliary Oven • Time events: 63 user-selectable events. Support up to 8 valves or 16 with the TRACE 1300 Auxiliary Oven. • Operating altitude: Up to 3500 m above sea level • GC Connectivity: One Ethernet LAN connection with fixed and dynamic DHCP assignment for PC based applications; Two RS-232-C ports for auto-sampler control; Handshaking h/w signal for external devices • Dimensions (H × W × D): 45 × 44 × 67 cm • Weight: 35 kg main unit plus 0.8 kg each Instant Connect injector or detector module 	

Instant Connect Split/Split less Injector Module Instant Connect-Split/Split less Injector module, includes: complete injector with integrated electronic gas control (IEC) featuring constant Flow and Pressure modes, programmable Flow and Pressure modes, Leak check and Column Evaluation; Max T = 400°C; split ratio up to 12500:1; Control of split flow in 1mL/min from 0 to 1250mL/min; Purge flow from 0 to 50 ml/min (electronic control); Suitable for all capillary columns (50µm to 530µm id); Large Volume split less injection up to 50uL using specific liners and pre-column.	02
The Instant Connect Flame Ionization Detector (FID) Module Capillary column optimized compatible with 1/8" and 1/16" packed column <ul style="list-style-type: none"> • Flameout detection and automatic re-ignition • Minimum Detectable Level (MDL): <1.4 pg C/s • Sensitivity: >0.03 Coulombs/gC • Linear dynamic range: >10⁷ (+/-10%) • Maximum temperature: 450 °C in steps of 0.1 °C • IEC: <ul style="list-style-type: none"> • Air: 0–500 mL/min in 0.1 steps • H2: 0–100 mL/min in 0.1 steps • Makeup gas (N2 or He) 0–50 mL/min in 0.1 steps 	01
Instant Connect Electron Capture Detector (ECD) Module Instant Connect-Electron Capture Detector module: high sensitivity and wide dynamic range featuring acquisition rate as high as 300 Hz; MDL: <4.5 fg/s lindane; linear dynamic range = >10 ⁴ (±10%); integrated electronic gas control (IEC); capillary column optimized; radioactive source: 370 MBq equal to 10mCi, 63Ni; Max T = 400°C; nitrogen or 95%argon/5% methane as make-up gas.	01
Start-up Kit/Installation Kit	1Set
GC Software	01
License Key	01
CALIBRATION Test Mix, FID Detector	01
CALIBRATION Test Mix, ECD Detector	01
TG-5MS GC Column 30M x 0.25MM x 0.25UM	01
TG-OCP I GC Column, 30M x 0.25MM x 0.25UM for Pesticide Analysis	01
TR-Green 11mm Pk 50	01
10uL Syringe 26S Gauge, FN, 57mm Length	01
S/SL LINER SGL TAPER 4X6.3X78.5MM 5PK	01
LINER SEALING RING FOR SSL / 5PK	01
SEPTA BTO 11MM 50/PK	01
COLUMN NUT FOR SSL & SSL BACKFLUSH 5/PK	01
Desktop Computer Configuration: <ul style="list-style-type: none"> • Processor Intel Core i3 7TH Generation Chipset OEM • Memory 8GB DDR3 SDRAM;1TB Hard Disk Drive • Optical Drive DVD Writer • Graphics On-board; Sound On-board • LAN 1 x 10/100/1000 • Monitor at least 18.5" wide screen LED TFT • KBD & HP • OS Win 10 Professional (License Version) – 64 Bit 	01
LaserJet Printer 1020 Plus or Equivalent	01
5KVA true online UPS with 30mints backup	01
UHP Grade Hydrogen Filled Gas Cylinder with Double Stage SS Diaphragm Pressure Regulator	01
UHP Grade Nitrogen Filled Gas Cylinder with Double Stage SS Diaphragm Pressure Regulator	01
UHP Grade Zero Air Filled Cylinder with Double Stage SS Diaphragm Pressure Regulator	01

Gas Purification Panel System with Molecular sieve, Moisture & Oxygen traps with necessary tubing's, Nuts & Ferrules for above He, H2, N2 and Zero Gas cylinder	1 Set
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Other Requirements	
Demonstration of instrument performance.	The supplier should demonstrate the working of the equipment by detecting some compounds of interest at the time of installation of the equipment. The acceptance would be subject to meeting the required criterion.
Manuals	1 set of detailed operation, servicing and other manuals should be provided in both soft form as well as Hard copy. Language should be English only.
Installation	The satisfactory installation to the full specifications of the machine with all accessories at NIT Rourkela campus. Any additional equipment/accessory for the installation of the system should be quoted invariably. NIT Rourkela will provide only space and electrical connection along with necessary solvents for running the equipment.
Training	Supplier should provide a comprehensive and free training to NIT Rourkela personnel for at least 3 working days.
Warranty	01 Year Standard Warranty (Front line service to be done at customer place & if any cards/modules are to be replaced can be taken to service center & back to bench service charges to be borne by Bidder). The Original End Manufacturer (OEM) should have Calibration and other maintenance support facility located in India.

Guarantee / Warranty and after sales technical support	
The tender must be quoted with one year on-site comprehensive Warranty/Guarantee commencing from the date of complete and satisfactory installation of the equipment against the defect of any manufacturing, workmanship and poor quality of the components. The bidder also must agree and issue a certificate stating that technical query will be responded within 7 working days and the support will be provided within 21 working days from the date of reporting of the technical failure for down time free operation of the instrument.	
Operation and service manual in English (electronic and hard copy) should be provided with all the equipment and components.	
In the technical details, specify clearly about the kind of service/maintenance required for the system. Also mention that whether the service has to be carried out by a company engineer or it can be carried by trained service personnel within India.	
The complete training of all measurement options should be free for NIT Rourkela user staff/students members, onsite.	
Enclose pre-installation guide for the details on electrical power, space and other for all components and essential accessories.	
A list of institutes (with details) in India where the similar equipment & model (with all options in this tender) has been sold or is under operation should be provided. Prospective vendor should clearly mention the type of measurement options (along with the main system) supplied to these institutes.	
The manufacturer has to stand guarantee for the relocation of the system from the present campus of NIT Rourkela to any other place if any in future.	