

DATE: 16th July 2021

Corrigendum 4

Tender No: RGIPT/JAIS/CRF/E-OPN/LAB/2020-21/04 (GC-FID-TCD-DHA)

Please refer to the above e-tender no. RGIPT/JAIS/CRF/E-OPN/LAB/2020-21/04 on rgipt.euniwizarde.com portal & institution website. The technical specification and dates of the bidding process for GC-FID-TCD-DHA is revised as follows;

- The revised technical specification of the above equipment is uploaded in the web-site.
- The revised date for the last date of submission of e-tender is **30th July 2021, 4 PM.**
- The date of opening of technical bid is **30th July 2021, 5 PM.**

Other terms and conditions remain unchanged.

Note: Please see www.rgipt.ac.in for more information in the bid.



U. Ojha

Chairman, CRF Purchase Committee

Technical Specifications	Bidders Specification	Compliance	Deviation
GC-FID-TCD-DHA			
Fully automatic microprocessor based Gas Chromatography system with Auto Injector/Auto Sampler for Analysis by using FID and analysis of gaseous sample - CH ₄ , CO, CO ₂ , and N ₂ , in a gaseous mixture by using FID. The system should have automatic/Electronic gas control system and can be controlled from chromatography management software. User friendly operation to manage the work from touch screen display. The system should have capability to install three or more numbers of Injectors and Detectors. Auto Diagnostics : Checks, corrects, operations and status of GC control, RAM, ROM, CPU Sensor, Keyboard and live Auto Diagnosis while Starting and while Running			
Column Oven			
Column Oven Size should be 10 ltrs or more			
Operating Temperature range - Ambient +5 °C to 450 °C or better			
Temperature Set Point Resolution: 1 °C			
Number of Ramps/Plateaus: 7/8 or more			
Maximum Heating Rate: 100 °C/min or more			
Oven Cool-Down (22 °C ambient): 400 °C to 50 °C in < 4 min			
The system should be upgradable with cryogenic system			
Performance Specifications			
Typical Retention Time Repeatability: 0.008 min or better			
Typical Peak Area Repeatability: <2% RSD or better			
Automatic / Electronic Pressure Control			
Up to 10 channels or more of integrated electronic gas control			
Pressure Set Points Minimum Increments: 0.1 psi in all ranges			
Should be quoted Auxiliary electronic gas control for backflush - Qty 1			
Auto Injector /Auto Sampler (Optional Item)			
Minimum vial capacity 8 or more with pre & post wash facility			
Should be quoted 2ml vial - Qty 500			
Carrier Gas Control for Capillary Column Injector			
Pressure Range: 0-100 psi or more			

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Modes: Constant Pressure, Constant Flow and Programmed Pressure			
Injector Programmed Temperature Vaporizer with Electronics gas controller- Qty 1			
Suitable for all (0.1 mm to 0.53 mm i.d.) capillary columns			
Temperature Range: 50 degC - 450 degC			
Constant pressure & constant flow modes, Pressure programming with three ramps and four plateaus			
Gas saver mode: Standard			
Modes: Split, Splitless and Solvent Split			
Temperature Programming Rate: 1 degC/min to 200 degC/min			
Packed Column Injector with electronic gas controller - Qty 1 (Optional Item)			
Suitable for different OD Packed columns and wide bore Capillary columns with adaptor			
Temperature Range: 50 degC - 450 degC			
Detector Flame Ionization Detector with Electronics gas controller - Qty 1			
Compatible with different OD Packed columns, narrow & wide bore capillary columns			
Flameout detection			
MDL: <3.0 pg C for C12 hydrocarbon or better			
Linear Dynamic Range: >10 ⁷ or better			
Maximum Temperature: 450 degC or more			
Thermal Conductivity Detector - Qty 1 (Optional item)			
Compatible with different OD Packed columns, narrow & wide bore capillary columns			
MDL: <800 pg Dodecane/ml He or better			
Sensitivity: 10 μV /ppm for Dodecane or better			
Linear Dynamic Range: >10 ⁴ or better			
Maximum Temperature: 400 degC or better			
Columns [Optional] [to be quoted]			
• Suitable Capillary column for Hydrocarbons analysis upto C100 - Qty 1			
• Porapak Q 3 feet X 1/8" SS 80/100 or Equivalent - Qty 2			
• Porapak Q 6 feet X 1/8" SS 80/100 or Equivalent - Qty 1			
• Molecular Sieve 5A 10 feet X 1/8" SS 80/100 mesh or Equivalent - Qty 1			
• 100 m column for DHA analysis: 2 Nos.			

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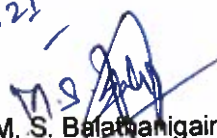
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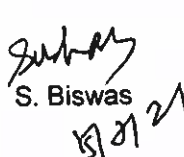
Automatic Heated Gas Sampling Valve & Startup Kit			
• Automatic heated 6 port column switching valve - Qty 1			
• Automatic heated 10 port inject & backflush valve - Qty 1			
• Additional separate valve oven to keep all gas sampling valves - Qty 1			
• 1ml loop with fittings - Qty 1			
• Installation/Startup Kit - Qty 1			
• 1ml Gas tight syringe - Qty 1			
• AGSV line filter with fittings - Qty 1 sets			
Software			
Suitable Chromatography Management Software 32/64 bit windows 2000 / XP based chromatography integration software with PC, Printer to manage the entire work from software. Hydrocarbons analysis			
Suitable software for DHA			
Consumables & Spares			
All necessary consumables & spares like all Gases with regulators, Tubing, liners, Nut, syringe, & ferrule to install the equipment.			
UHP grade Helium filled cylinder with double stage SS regulator - Qty 1			
UHP grade Hydrogen filled cylinder with double stage SS regulator - Qty 1			
UHP grade Zero Air filled cylinder with double stage SS regulator - Qty 1			
5KVA online UPS, 230VAC, 50Hz Single Phase I/P & O/P, 30min backup - Qty 1			
Startup/Installation Kit - Qty1			
Gas purification panel for Helium, Hydrogen & Zero Air - Qty 1set			
Calibration Standard			
DHA Calibration Standard upto C100- Qty 1			
Calibration Standard mixture for H ₂ , O ₂ , N ₂ , CO, CO ₂ & CH ₄ in balance Helium 0.5 ltrs WC- Qty 2			
Warranty			
Standard warranty - three year			

All the items/accessories shall be factory fitted and shall be able to operate with minimal manual intervention


A. K. Choubey

16.7.2021

M. S. Balamangaimani


D. Panda 15/7/21


S. Biswas 15/7/21


U. Ojha 15/7/21