

प्री-बिड बैठक के कार्यवृत्त/ MINUTES OF PRE-BID MEETING

दिनांक/Dated: 17.11.2025

गैस क्रोमैटोग्राफी सिस्टम की विनिर्देशों को अंतिम रूप देने हेतु 10 नवम्बर 2025 को प्रातः 11:00 बजे बोर्ड रूम में एक ऑनलाइन प्री-बिड बैठक आयोजित की गई।

An online pre-bid meeting was held in the Board Room on **10th November 2025 at 11:00 AM** to finalize the specifications of **Gas Chromatography System**.

तकनीकी एवं खरीद समिति (T&PC) के साथ-साथ निम्नलिखित फर्मों के प्रतिनिधियों ने बैठक में भाग लिया:

Along with the Technical and Purchase Committee (T&PC), the following representatives of the firms participated in the meeting:

1. श्री संजीव सिंह, M/s Scion Instruments Pvt. Ltd.
2. श्री सौरभ दुबे, M/s Thermofisher Scientific Pvt. Ltd.
3. श्री विकास बंसल, M/s Shimadzu Pvt. Ltd.

बैठक में निम्नलिखित बिंदुओं पर चर्चा की गई:

The following points were discussed in the meeting.

1. **Temperature Range:** Column oven can accommodate two columns with a temperature range from ambient +5°C or less to 450°C or higher and set point resolution of 0.1°C or better.
2. **Cooling:** Very fast cooling of oven from 450°C to 50°C.
3. **Auto Sampler:** Auto sampler with 30 vials or more.
Waste Vial Capacity: 4 Nos. or more.
Wash Vial Capacity: 4 Nos. or more. Large volume injection facility up to 150 µL or more.

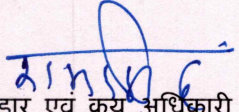
उपरोक्त तकनीकी विनिर्देशों पर चर्चा के बाद, तकनीकी एवं खरीद समिति (T&PC) ने निम्नलिखित संशोधनों की अनुशंसा की, जिसे सक्षम प्राधिकारी द्वारा अनुमोदित किया गया है:

After discussion on above points in the technical specifications, the Technical and Purchase Committee (T&PC) has recommended the following changes and the same has been accorded by the competent authority.

1. **Temperature Range:** Column oven can accommodate two columns with a temperature range from ambient +4°C or less to 450°C or higher and a set point resolution of 0.1°C or better.
2. **Cooling:** Very fast cooling of oven from 450°C to 50°C in **5 minutes** or less.
3. **Auto Sampler:** Auto sampler with **100 vials** or more.
Waste Vial Capacity: **2 Nos.** or more.
Wash Vial Capacity: **2 Nos.** or more. Large volume injection facility up to **100 µL** or more.

उपरोक्त के मद्देनज़र, अंतिम तकनीकी विनिर्देश परिशिष्ट-I के रूप में संलग्न हैं।

In view of the above, the final technical specifications are attached as **Annexure-I**.


भंडार एवं क्रय अधिकारी 17/11/25
(सीएसआईआर की ओर से)

Final Technical Specifications for Gas Chromatography System

S. No.	Description	Technical Details
Gas Chromatograph:		
	i.	Fully automated dual channel system.
	ii.	Carrier Gas Pneumatic program: suitable as per instrument requirement.
	iii.	Large touch screen display with provision to display chromatograms and method parameters with compatible software for online monitoring in PC
1	<u>GC Oven</u>	Illuminated GC oven for easy replacement of column by users
	Temperature range	Column Oven can accommodate two columns with a temperature range from ambient +4 °C to 450 °C or higher and set point resolution of 0.1°C or better.
	Temperature stability	± 0.1 °C or better
	Ramp rate	Up to 120 °C/min. or better
	Heating Ramps	20-30 ramps/programming steps or more.
	Cooling	Very fast cooling of oven 450 to 50 Deg C within 5 minutes or less.
	Oven volume:	13 Liter or more to accommodate 2-3 columns simultaneously
2	Split/Splitless Injector - 01 No.	a) Temperature setting should be up to 400°C or better. b) Compatible with different Internal Diameters from 0.1 to 0.53 mm. c) Split ratio setting range: 0 to 7500 or better d) Pressure setting range: 0 to 150 psi or better e) Gas saver mode for reduced gas consumption
3	Electronic Pressure/Flow control:	The pressure and flows must be independently controlled for all injectors and detectors through software only. System should have constant Pressure, constant flow and constant linear velocity mode. Automatic Leak check.
4	Software:	<ul style="list-style-type: none"> • 64 Bit Advanced Chromatographic integration software. • The software should be able to acquire data from all the detectors and should have a single point control of all gas chromatographic parameters • All standard chromatographic parameters for qualitative and quantitative analysis should be available
5	Flame Ionization Detector (FID)	Detection Limits – 1.2 pg C/s or less, Electronic/Advance Flow Control (EFC), Dynamic Range – 10 ⁷ or better, Temp. Range: Up to 450°C or more, Automatic

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		flame out detection and re-ignition, Maximum Acquisition rate: 500 Hz or better
6	Auto-Sampler:	<p>Auto-sampler with 100 vial or more (2ml capacity) .</p> <p>Waste Vial Capacity: 2 Nos., or more</p> <p>Wash Vial Capacity: 2 Nos. or more, Large volume injection facility up to 100 uL or more.</p>
7	Spares & Consumables:	<p>a) Injection Port Septa – 200 Nos., Glass Insert for Split & Splitless (5 Each)</p> <p>b) Graphite Ferrule 0.5 mm (20 Nos.), Graphite Ferrule 0.8 mm (10 Nos)</p> <p>c) Manual Syringes - 10 uL (5 Nos.), Autosampler Syringes 10 uL – 5 Nos.</p> <p>d) Column Cutter – 1 No.</p> <p>e) O-ring – 10 Nos.</p> <p>f) Split Filter – 1 No.</p> <p>g) Auto sampler vials, caps with septa (1.5 ml) – 500 Nos.</p> <p>h) Glass Wool – 1 Pack</p> <p>i) FID jet- 4 No</p>
8	Columns	<p>Columns</p> <p>i. DB-5MS/Rtx or equivalent, -5MS – 1 No- 30 meter</p> <p>ii. DB-WAX/Rtx-WAX or equivalent, - 1 No.- 30 meter</p> <p>iii. Chiral Column – 1 No.</p> <p>iv. Column for FAME Analysis -1 No.- 100 meter column</p> <p>v. CP-TAP CB 25m or Equivalent Column for Tri-Glyceride Analysis– 1 No.</p>
10	Utilities:	<p>(a) Gas Generators</p> <p>Requirement of Gas generators for supply of gases in Gas chromatography's FID (Hydrogen gas) Carrier gas, Make-up gas (Nitrogen gas), zero air & sufficient pressure for simultaneous use of GC's</p> <p>Hydrogen gas generator</p> <ul style="list-style-type: none"> 99.9995% pure hydrogen from deionized water with PEM Cell technology. Flow rate: maximum flow $\leq 90\text{ml/min}$ or 100 CC with the output pressure of 100 psi. No Alkaline (NaOH; KOH) to be used in hydrogen generation process. Should have Automatic Water loading pump to enhance the performance of generator. <p>Nitrogen Gas generator</p> <ul style="list-style-type: none"> Should produce ultra- pure nitrogen ($\geq 99.9995\%$) for GC carrier Gas, make-up gas, application with Flow rate: $\leq 250\text{ml/min}$; pressure 80 psi with hydrocarbon content of less than 0.05 ppm. <p>Zero air gas generator.</p> <ul style="list-style-type: none"> Purity < 0.05 ppm total hydrocarbons processed through catalytic chamber Flow rate: $\leq 1500\text{ml/min}$. <p>Air Compressor</p> <ul style="list-style-type: none"> Must provide sufficient compressed air for inlet air for nitrogen and zero air. Compressor must be stackable designed with service indicator, dampens vibrations & noise.

Signature

	<ol style="list-style-type: none"> 1. Gas generators should be tested & approved with all major GC manufacturers, 2. Serviceability- vendor must have local stationed engineer in the region to ensure the direct service support with-in 24 hours of service issues and has proven track record of atleast 05 similar generators installation in CFTI/CSIR Labs/IIT's last 3 years. (b) Branded All-in-One PC 13th Gen Intel Core i7 27" (68.6cm) FHD 16GB RAM, 1TB SSD, Wireless Keyboard and Mouse with licensed Windows 11, atleast 2 USB port and Laser Printer (c) Compatible online at least 5 KVA UPS (or higher) with min. 60 min back up
Warranty:	System must be quoted with atleast Three Years warranty
Published Brochure & Data sheet	All the specifications asked in tender should be supported by published literature from Principal manufacturer in the form of Brochure & Data sheet.
Certifications	Bidder/Supplier/Manufacturer should confirm compliance to the following International safety guidelines and should enclose certificates along with bid from Principal company/Manufacturer: Safety standards (IEC 61010-1, IEC 61010-2 010), EMC (EN 61326 -1)/International safety certifications, Quality/Manufacturing Standards (Quality management system: ISO 9001:2015; Environmental management system: ISO 14001:2015
Upgradability	Quoted GC must be upgradable with Single/Triple/HRMS, Quadruple Mass Spectrometer in future.
Any accessory / Consumables required to perform above said application should be quoted along with instrument or should be provided free of cost at the time of installation.	
Important Note:- <ol style="list-style-type: none"> a) All the requirements laid down under the above specifications must carefully read and understood before claiming your instrument as "complied". b) Compliance statement sheet with technical bid should be provided and if there is any deviation in above mentioned specifications should be clearly highlighted in remarks. c) User list should be attached along with literature. d) The quoted model should has at least 05 Installations in CFTI's like IIT's/ CSIR- Institutes etc e) Payment will be released only after confirming all above hardware & software features asked in tender. f) The vendor should have office or agents in India. 	