CENTRE FOR RURAL DEVELOPMENT & TECHNOLOGY: DELHI
Minimum Specification for the Gas Chromatograph

Column Oven
Accommodates up to two 30 m × 0.32 mm id capillary columns
Operation temperature range suitable for the all columns and chromatographic separation. Ambient temperature +10 °C to 450 °C.
Support at least 08 oven ramps.
Achievable temperature ramp rate: 130 °C/min or better.
Oven cooled down : 450 to 50 °C in 2.5 min on less.
Electronically Pressure Control /APC/PPC control

Injectors
Programmable-temperature vaporizing (PTV) Capillary injector/Programmable S/SL injector-One.
Capillary injector -One
Suitable for all capillary columns (35 μm to 530 μm id).
Maximum temperature for S/SL injector 450 °C and 500 °C for PTV/PSS injector.

Detector
1. Flame Ionization Detector
Linear dynamic range: > 10⁶
Operating temperature 100 °C to 450 °C in 1 °C increments
Sensitivity >0.015 coloums/g C
Minimum detectable quantity <1-3 pg C/sec
Automatic ignition and re-ignition of FID flame through software
Should not require any make up gas

2. Electron Capture Detector
Minimum detectable level: < 0.08pg
Linear dynamic range: > 10⁴
Uses β emissions of < 15 mCi 63 Ni As the electron source
Maximum operating temperature 450 °C
Standard EPC/APC/PPC makeup gas

Pneumatics
Electron pneumatics control/PPC/APC with atmospheric pressure compensation

Splitting/ Back flushing device
The GC system should be capable of splitting the sample between detector and also doing back flushing to increase the column life.

Accessories
Sample injection syringe: 1 μl, 10 μl & 50-100 μl
Appropriate window compatible software for data processing, integrator for analysis of data in compliance with GLP
Column (s) for analysis of fatty acid, esters (Biodiesel), essential oils and pesticides
Other standards accessories like nuts, ferules, septum, fuses and tools
A desktop system (TFT) to be provided along with the instruments.
Terms and condition

1. Quotation to be made in sealed envelopes. Technical and commercial bids must be sent separately in 2 sealed envelopes, subscribed with ‘Technical bids’ and ‘commercial bids’ and then put together in one envelope addressed to Head, CRDT, Block III, IIT Delhi, Hauz Khas, New Delhi-110016.
2. Prices must be quoted as FOB.
3. Payment will be made through LC only. Name and address to whom LC is made out should be clearly specified.
4. Three year warranty should be provided.
5. Please specify the list of consumables required along with the price separately.
6. Any applicable academic institutions discounts should be clearly mentioned.
7. Authorized distributors to provide the necessary certificate of distributorship.
8. Please provide a list of users to whom instrument have been supplied to, over the last 3 years.
9. Printed brochure should be provided.
10. The institute reserves the right to accept or reject any or all the quotations without assigning any reason thereof.

Head, CRDT
IIT Delhi
Hauz Khas, New Delhi-110016