



CSIR-Indian Institute of Petroleum

(Council of Scientific & Industrial Research)

P.O.I.I.P., MOHKAMPUR, DEHRADUN – 248005 (UK) **INDIA**

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TENDER NOTICE NO 22/2017-18

Sealed tenders under two bids system (Part-I Technical bid along with EMD and Part II Price bid) are invited from the Indian / Foreign manufacturers/ Authorized Distributors or Indian Agents for the supply, installation and commissioning of the following equipment:-

Sl.No	File No.	Description	Qty	EMD (in Indian Rupees)
1.	PUR/1/17-18/280/JK/FTL/PO:	Gas Chromatography	One	Rs 64,000.00 (Rs Sixty Four Thousand Only)

The bids must reach this office on or before **31.01.2018** upto **14:30 hours (IST)** and shall be opened on **same day at 15:00 hours (IST)**.

Please visit our website www.iip.res.in for further details for standard bid documents.


(Stores & Purchase Officer)



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INVITATION FOR BID / NIT (Two Bid System)

1. Sealed tenders under two bids system (part-I Technical bid along with EMD and part II Price bid) are invited from the Indian / Foreign manufacturers/ Authorized Distributors or Indian Agents for the supply, installation and commissioning of the following equipments:-

Sl No.	Tender No.	Description of items	Qty	EMD (in Indian Rupees)
1.	PUR/1/17-18/280/JK/FTL/PO:	Gas Chromatography (Detailed specification as per Annexure)	One	Rs 64,000.00 (Rs Sixty Four Thousand Only)

2. The complete set of "**Standard Bid Document**" is available in our website www.iip.res.in at free of cost. The same may be downloaded and used while preparing your bid. A copy of the same may be attached along with the bid, duly signed and stamped.
3. The bids must reach this office on or before **31.01.2018** upto **14:30 hours (IST)** and shall be opened on **same day at 15:00 hours (IST)**.
4. EMD should be in favor of Director, I.I.P, Dehradun in form of Demand Draft or Bank Guarantee.
5. The Director, **Indian Institute of Petroleum, Dehradun** reserves the right to accept any or all tenders either in part or in full or to split the order without assigning any reasons there for.
6. The Indian agent of the foreign suppliers should be enlisted with DGS&D.

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TECHNICAL SPECIFICATION

Gas Chromatography with dual parallel channel for determination of oxygenates and aromatics in gasoline. The GC must comply with ASTM D5580 and ASTM D4815 methods.

S.No		Specifications
1	CHROMATOGRAPHIC PERFORMANCE	i) The GC must comply with ASTM D5580 and ASTM D4815 methods.
		ii) Retention time repeatability < 0.008% or <0.0008 min or better
		iii) Area repeatability <1% RSD.
		iv) Automatic leak check and self-diagnostic in case of errors.
2	OVEN	i) Ambient temp +4°C to 450°C.
		ii) Maximum achievable temp rates: 100°C/min or better
		iii) Oven cool down time from 400°C to 50°C in less than 5.0 min or better
		iv) Temp stability should be within 0.1% of the actual temp.
3	INJECTORS(2No.S)	i) Split/splitless Inlet system with pneumatics control
		ii) Maximum temp : 450°C
		iii) 0-100psi or better operation with 0.01psi increments
		iv) split ratio up to 1000:1 or better to avoid column overload
		v) Gas saver mode to reduce gas consumption
4	FLAME IONIZATION DETECTORS(2No.S)	i) FID with pneumatic control
		ii) Maximum temp: 450°C
		iii) Minimum Detectable level $\leq 2\text{pg C/s}$
		iv) Linear dynamic range : > 10 to power 7
		v) Flame out detection & auto reignite
		vi) Data rates 300Hz or better
5	FLOW CONTROL SYSTEM	i) The Gas chromatograph should have Electronic Flow Control System such as constant pressure, pressure programmer, constant flow and flow programmer for carrier gases, Detectors and for auxiliary gases
		ii) The electronic flow control system should be able to set the pressure to a minimum accuracy of 0.1 or better.
6	COLUMN	One set of suitable columns for ASTM D4815 and D5580



7	CHROMATOGRAPHY MANAGEMENT SOFTWARE	The chromatography software should be compliant with latest windows based operating system. The software should have standard GC software features like interactive graphics, tool bar for online editing, batch data processing, automated baseline correction, peak integration, overlay, baseline compensation, S/N ratio adjustment
8	CALIBRATION BLEND	Suitable calibration blends for ASTM D4815 and ASTM D5580 and 1.0(v/v)%Benzene(10No.S), 5(v/v)%, 10(v/v)%, 15(v/v)% Ethanol standards.
9	PC AND PRINTER	The system should be supplied with a branded computer along with double stage printer with latest and required configuration for running the system software for data acquisition, data processing and data storing and printing purpose.
10	INSTALLATION	Supply complete installation with required accessories (except gas cylinders) and commissioning at FTL, B-14, Sector 62, Noida (UP).
11	WARRANTY	12 months warranty from the date of commissioning. A certificate from the vendor is required stating that it will provide compulsory ten year service support with required spares after the supply of the instrument
12	OTHER ACCESSORIES	All technical point should be mentioned in origin Lit or Brochure On-site training: Installation, complete demonstration of the capabilities of the system with standards for ASTM D4815 and ASTM D5580 at FTL, B-14, Sector 62, Noida (UP). The equipment must be complete in all respect for estimation of benzene and oxygenates in gasoline samples
13	OPTIONAL REQUIREMENTS	Injector system should have automatic liquid sampler (ALS) with at least ten vials. The vendor should quote separately essential spares and consumables for three years smooth operation. Additional 24 months of comprehensive warranty after completion of the compulsory 12 months warranty One set of suitable columns for ASTM D4815 and D5580

