



CSIR-Indian Institute of Petroleum

(Council of Scientific & Industrial Research)

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

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ISO-9001 Regd. Institute

TENDER NOTICE NO 21/2017-18

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/1/17-18/240/CDS/FTL/PO:	High Pressure Liquid Chromatograph	One	Rs 70,000.00 (Rs Seventy 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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TENDER NOTICE NO 21/2017-18

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/1/17-18/240/CDS/FTL/PO:	High Pressure Liquid Chromatograph (Detailed specification as per Annexure)	One	Rs 70,000.00 (Rs Seventy 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

**High Pressure Liquid Chromatograph complying with IP 391 and
ASTM D6591 methods with additional UVis Detector.**

S.No		Specifications
1	Binary Gradient Solvent Delivery System	Flow rate 0.001 to 5.0 mL/min. (with increment of 0.001mL/min)
		Flow precision: 0.2% RSD or better at operating/defined flow rate
		Flow accuracy: $\pm 1\%$ or better at operating/defined flow rate (i.e.@1.0 mL/min)
		Operating pressure upper limit : 5000 psi
		Online degasser, solvent reservoirs,
		Compressibility compensation
		Compositional accuracy 0.5%
		Compositional precision < 0.5% RSD
		Gradient formation High-pressure binary mixing
		Operating pressure limits: Programmable high and low low pressure limits, user selectable in psi, bar
2	Injector	Manual Injector: A suitable fixed loop manual injector (with 10, 20, 50 uL loops) Repeatability better than 1%.
3	Column Compartment	10 degrees below ambient to 60 °C, temperature control precision $\pm 0.5^\circ\text{C}$.
		For minimum 3 (30cm)columns accommodation
		Quick-Change position with port valve system through software control.
4	Column Back Flush device	Automated Back Flush valve capable of operating at system pressure .
5	Dual wavelength UV/Vis Detector	Wavelength Range : 190-600nm
		Wavelength Accuracy : $\pm 1\text{nm}$
		Linearity range: ≥ 2.5 AU (5%) upper limit
		Drift: 1×10^{-4} AU/hr at 230 nm (defined)
		Band width 5nm
		Light source: Deuterium lamp
		Data acquisition rate: Up to 50Hz
6	RI Detector	Refractive Index range: 1.00 to 1.75 RIU meeting sensitivity requirement.
		Flow rate: 0.1 to 5.0 ml/min (with given cell size)
		Flow Cell: Fused Quartz or better
		Noise: $\pm 2.5 \times 10^{-9}$ RIU mode.
		Drift: $\pm 2.0 \times 10^{-7}$ RIU/hr.
7	Chromatography management software	The chromatography software should be licensed and compatible with latest windows based operating system. The software should have standard software features like interactive graphics, batch data processing, automated

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		baseline correction, peak integration, overlay, baseline compensation, S/N ratio adjustment etc. It should be latest offering by the manufacturer.
8	Spares	a) Two additional set of suitable columns for IP391 / ASTM D6591 with suitable guard columns with guard fittings. b) Suitable 50 & 100, uL syringes (two each)
9	PC and Printer	The system should be supplied with a branded computer along with Laser printer. The computer system should be compatible for running the system software for data acquisition (should have matching acquisition speed), data processing, data storing and printing purpose.
10	Optional requirements	Essential spare parts for three years smooth operation. All technical point should be mentioned in original literature or Brochure. On-site training: Installation, complete demonstration of the capabilities of the system with standards for IP-391 and ASTM D6591 method (with latest version also). Suitable calibration standards for IP391 / ASTM D6591 and EN12916:06. Standard test sample (with analysis chromatogram) should be provided by supplier at per IP-391 / ASTM D6591 method.
11	Additional compliances .	12 months warranty from the date of commissioning. Additional optional warranty for 12 months should also be quoted. Installation/commissioning at the cost of supplier. All major modules should from OEM i.e. it should be an integrated system from OEM. System pricing should be itemised for clear cost assessments and apple to apple comparison. All electrical fitting must be flame proof and certified for operation in hydrogen/hazardous atmosphere. Two Set of operating and service manual FOC. All relevant calibration certificates must be provided. On-site user operation, maintenance and troubleshooting training FOC to institute. System performance Guarantee certificate from supplier. 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.


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