



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्  
Council of Scientific & Industrial Research  
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं  
National Aerospace Laboratories

INVITATION FOR TENDERS

Tender No. NAL/PUR/MSD/179/22-Y

Dated: 10/02/2023

CSIR - National Aerospace Laboratories (NAL), Bengaluru, Republic of India, is one of the premier research laboratories under aegis of Council of Scientific and Industrial Research (CSIR), an autonomous body under the Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organisation. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl. No.	Description of Item(s)	Unit	Quantity
1	Vapour Pressure Osmometer for molecular weight estimation and related accessories. (Please refer annexure for detailed specification)	Set	01

Single / Double Bid Only	Two	Tender Type	Global
Bid Security (EMD) (in INR)	Bid Security Declaration should be enclosed with quotation	Bid submission end date	06-Mar-2023 10.00 Hrs
Performance Security	Nil	Bid opening date	07-Mar-2023 11.00 Hrs

01. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders' who have not registered in e-procurement can register free of cost before participating through the website <https://www.etenders.gov.in>. Bidders are advised to go through instructions provided at 'Instructions for Online Bid Submission'.
02. Tenderers can access tender documents on the website (for searching in the NIC site <https://www.etenders.gov.in>, kindly go to Tender Search option, select tender type and select 'Council of Scientific and Industrial Research', in organisation tab and select NAL-Bengaluru-CSIR in department type. Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://www/etenders.gov.in> as per the schedule given in the next page.
03. a. Global Tender Enquiry: Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but *not* both. However, the offer of the Indian Agent should also accompany the authorisation letter from their principal. To maintain sanctity of tendering system, one Indian Agent *cannot* represent two different Foreign principals in one tender



## CSIR-National Aerospace Laboratories, Bengaluru-560 017, INDIA

- b. Open Tender enquiry: Only Local suppliers with prescribed local content as detailed in DIPPT Order No. P-45021/2/2017-PP (BE-II) dated 16<sup>th</sup> Sep, 2020 and subsequent orders issued by Ministry of Finance (GoI) from time to time, are eligible for bidding. Bidders must enclose the certificate declaring the local content of supplies as per our standard form.

Note: Kindly refer to the first page (NIT) for tender type (i.e. Open Tender Enquiry / Global Tender Enquiry) and submit your bid accordingly.

04. Unsolicited / conditional / unsigned Quotations/Quotations received after the due date and time shall be summarily rejected. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
05. The bids' failing to comply with the following clauses will be summarily rejected.
- a. The Bidders' proposing to supply finished products directly/indirectly from vendors' of countries sharing the land border with India should submit a copy of registration done with DPIIT.
- b. If the products supplied are not from vendors of countries sharing land border with India, the Bidders' have to enclose a declaration to that effect.
06. As per Govt. of India procurement policies,
- a. The purchaser intends to give purchase preference to local supplies (Preference to Make in India) in case the cost of procurement is up to Rs. 50.00 lakhs.
- b. The procuring entity intends to give purchase preference to products/goods manufactured by micro, small and medium enterprises.
07. Bidders' are requested to refer to the instructions regarding Procurement Policies for "Make in India", issued by Ministry of Commerce and Industry, Department of Industrial Policy and Promotion dated. 28-May-2018, and 4-Jun-2020 and guidelines as and when issued.
08. Kindly, note CSIR-NAL **GST No. 29AAATC2716R1ZB**. And the bidders' are requested to furnish their GST No. in their invoice failing which we will **not** be able to make timely payment.
09. Printed conditions, if any, submitted along with your quotation shall not be binding on us.
10. The prospective bidders' are requested to refer to the Standard Terms and Conditions available on NAL Internet ([www.nal.res.in](http://www.nal.res.in)) under the icon Tender-Purchase before formulating and submitting their bids'.
11. The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.

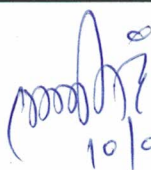
Thanking you,

Yours faithfully

**Stores & Purchase Officer**  
**For and on behalf of CSIR-NAL**

## SPECIFICATIONS OF VAPOUR PRESSURE OSMOMETER WITH RELATED ACCESSORIES

NAME OF THE INSTRUMENT		Vapour Pressure Osmometer for molecular weight estimation
<b>MEASURING UNIT</b>		
1.	Molecular weight Measurement Range	Typically, 650 to 20,000 g/mol in organic solvents such as benzene, toluene
2.	Sample volume	10 $\mu$ L nominal in suitable sample holder
3.	Measurement Time	Up to 180 seconds
4.	Sample Injection syringes	1 ml glass syringes with Teflon-headed steel pistons or appropriate
5.	Solvents to be used	Organic solvents, Benzene, Toluene
6.	Repeatability	$\leq 2$ mmol/kg Standard Deviation between 20 to 1000 mmol/kg; $\leq 0.5\%$ of reading between 1000 and 3200 mmol/kg; while operating between 20 and 25 $^{\circ}$ C.
7.	$\Delta T$ head thermostat	0-6 $^{\circ}$ C
8.	Linearity	$\pm 5\%$ of reading over total range and $\pm 1\%$ of reading over calibrated range.
9..	Calibration standards	Osmolality standards with Polystyrene or benzil standards from 750 g/mol to 2000, 4000, 5000, 10000 g/mol.
10.	Operating Temperature	To operate between 20 $^{\circ}$ and 130 $^{\circ}$ C
<b>CONTROL UNIT</b>		
11.	Control Unit with LCD color monitor with key board, CD Rom drive and Windows 10 operating system monochrome laser printer (HP Laserjet 1020 Plus), The control unit is equipped with a operational software that assists in the operation of measuring unit. Standard Accessories: 2 Spare fuses, 10 Vapour wicks, 1 handle for pulling the cell. 1 Hex key for fixing the measuring probe, 1 electronic thermometer, Luer needles with 6 springs, 12 pc. for vapor pressure osmometer, length 15 mm, cannula 38 mm AD 0.6 mm for glass- and Teflon syringes, Syringes with a steel/teflon piston Universal thermistor 20-130 $^{\circ}$ C	
12.	Electrical Power supply Power Fuses	100 to 240 Volts AC @ 50-60 Hz. Transient. Power 40 Watts maximum. Fuses (2 required) 5 x 20 mm time-delay type T- 1 ampere at 250 Volts.
13.	Instrument /working Table each	Appropriate size (5.0 x 3.0 x 2.5 Feet) to keep Osmometer/prepare the samples and standards for calibration
14	Tools	Any relevant screw drivers necessary for the operation of instrt.
15	Instructions manual	Safety precautions Warranty and Tool kit and Spare parts kit should be provided.
16	Installation will be done by the vendor and Operational Training as part of installation/commissioning at our site	
17	Warranty	24 months from the date of installation for raw material or manufacturing defect.

  
 10/02/2023