

Ref No. NITRA/ PUR/ PT-1/2026-27/1220

TENDER DOCUMENT

Last Date for submission of the Bids: 29th May, 2026 upto 12.00 pm

Sealed Bids are invited for purchase of ‘Contact Angle Goniometer’

Chairman Purchase Committee-NITRA invites sealed bids for purchase of “Contact Angle Goniometer” under the project “Application of New-Age Hydrophobic–Oleophilic Milkweed Fibres for Oil and Grease Removal from Industrial Wastewater” sponsored by Ministry of Textile, Govt. of India.

Instrument Minimum Specifications are as below:

Contact Angle Goniometer

Qty: 1Set

The Contact Angle Measurement Unit should be fully automated and software-controlled for determination of contact angle. The system must be capable of measuring surface free energy and surface tension. The unit should automatically detect and capture the droplet, and the software should be capable of drawing the tangent for determination of contact angle. The unit should have a user-friendly interface connected to computers preferably through USB port for data transmission. The system should be supplied with a licensed copy of the required software package.

Technical Requirements

1. **Measurement Method:**Sessile Drop, Pendant Drop method for surface tension measurement.
2. **Dosing System:**Manual/software-controlled capable of dispensing minimum volume of 1 μ L.
3. **Cartridge/Syringe Volume:**Disposable cartridge (1 mL) / disposable syringe (1 mL) with resolution of 0.1 μ L.
4. **Analysis System:**Contact Angle – Theta/2 method, Tangent method, Circle fitting, Ellipse fitting.
5. **Surface Free Energy Models:** Kitazaki-Hata, Owens-Wendt, Kaelble-Uy, Wu acid-base, Young-Dupré, Zisman Plot.
6. **Surface Tension / Interfacial Tension:**Young-Laplace Method, ds/de Method.
7. **Contact Angle Range:**0 – 180°
8. **Surface Tension Range:**0 – 100 mN/m
9. **Resolution:**0.01°
Accuracy: 0.3°
10. **Light Source:**High output LED light source.

11. **Camera:**High-speed camera with USB 3.0 connection, performance minimum 30 fps with fixed/variable zoom.
12. **Surface Free Energy Kit:**Appropriate kit should be provided for automatic surface free energy calculation of any solid surface.
13. **Sample Stage Size:**Not less than 100 × 100 mm.
14. **Stage Movement:**Stage should be movable as per requirement during determination of contact angle.
15. **Droplet Dispensing:**Manual dispenser with minimum 1 µL or better.
16. **Needles & Syringes:**All accessories should be provided with Teflon-coated needle, glass syringe set, and pendant drop needle set.
17. **Power Supply:**AC 100–240 V, 50/60 Hz, 7W, 20VA suitable for Indian standards.

Additional Requirements:

- The unit should include calibration kit for contact angle measurement.
 - Operation manual should be supplied.
 - The computer should have minimum configuration of Intel i5 processor, 4 GB RAM, 500 GB HDD/SSD, Windows 10 or above.
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- **Delivery:** Within 60 days
 - **Warranty:** The instrument shall come with a **warranty period of 2 years with 1 year AMC.**

Packing and Submission of the bid/bids

- A. The tender shall be submitted on or before 29-05-2026 (up to 12.00 PM) and at the address given in appendix-TF. Any tender received after this date and time shall not be accepted. Tenders shall be packed, marked sealed and submitted in original with the documents listed below.

Tenders shall be submitted in two separate sealed covers e.g. “Technical Bid” & “Financial Bid” for each instrument separately.

- B. Sealed cover “**Financial Bid**” shall contain financial Specification.
- i. Bill of Quantities duly completed with price.
 - ii. Covering letter in duplicate bringing out the tenderer’s reservations, if any, regarding compliance with the tender document and his own specific assumption, if any.
 - iii. Bills/Schedule of Quantities duly completed with price which will be inclusive of all taxes (GST, Excise Duty, Customs Duty etc.) any other Govt. levies & all other charges (packing, forwarding, loading-unloading, erection and commissioning, insurance and any other incidental charges by whatever name called). Break-up of the taxes/levies/all other charges will also be mentioned.
 - iv. It is necessary to fill the Tender Value precisely. In case, all individual items are not quoted, it will be deemed that the Tender Value is inclusive of quotes of all the individual items as per the tender document.

C. Sealed cover “Technical Bid” shall contain

- i. SSI Certificate if the Manufacturer/supplier, is registered as small industries with the Government.
- ii. Profile of the Bidder’s Organization.
- iii. Copy of the PAN Card of the Organization.
- iv. Copy of the Registration Certificate of the organization.
- v. If the bidder does not manufacture the equipment, authorization of the manufacturer to the bidder for marketing and servicing the equipment in India should be closed along with the tender. In the absence of such authorization, the tender will not be considered.
- vi. Technical Specifications in detail of item for which bid has been submitted.
- vii. List of items with quantities for which the financial bid has been submitted.
- viii. The item for which the bid has been submitted should contain the **list of clients** to whom the respective equipment with same specifications has been supplied.
- ix. Tender documents, which shall be signed by the authorized person(s) and seal affixed.

D. The sealed envelope containing the covers ‘Technical Bid’ & ‘Financial Bid’ as above shall be marked in the name of the Chairman Purchase Committee, NITRA, Ghaziabad indicating the name of the item for which the bid is submitted.

Terms & Conditions:

1. Modifications if any of the tender documents will be made by addenda/corrigenda. One copy shall be signed, sealed and submitted packed along with the tender documents.
2. No Bids/Quotations shall be entertained, if it is not sealed properly, or sent through e-mail, fax, telex or telegraphic mode.
3. The quoted price should be written both in words and in figures. In case of conflict between the figures and words in the rates, the latter shall prevail.
4. The suppliers of the item should provide both theoretical and practical training after commissioning at an appropriate stage.

Terms of Payment:

1. The terms of payment in case of indigenous equipment/ machinery & accessories shall be as under :
 - a) 20% of the machinery cost ex-factory will be paid as advance against confirmation of orders.
 - b) 70% payment will be made against successful installation, commissioning and demonstration of satisfactory performance of the machinery / equipments at site.
 - c) Balance 10% payment will be made within one month from the date of installation & submission of Performance Bank Guarantee for 12 months. If performance bank guarantee is not being submitted, then remaining payment will be released after 12 months from the date of installation. Format of Bank Guarantee will be provided in due course.

TENDER OPENING DATE & TIME: 29-05-2026, 03.00 pm at NITRA Ghaziabad

Email:mail@nitratextile.org(for any query/clarification)

PhoneNos.: 0120-2807390/91/92/93/94/95

TENDERFORM

To,
The Chairman
Purchase Committee
NITRA
Sector-23, Raj Nagar
Ghaziabad-201002(U.P.).

Sub: **Purchase of “Contact Angle Goniometer” to NITRA, Ghaziabad as per the specifications and Quantities mentioned in the tender.**

Dear Sir,

- a. Having examined the conditions of Tenders/ Specifications of the equipment, we, the undersigned, offer to supply equipment as per specifications given in the tender.
- b. We agree to abide by this tender for the period given in Appendix TF from the opening date fixed for receiving the same and it shall remain binding upon us for a mutually extended period agreed in writing by us.
- c. If our tender is accepted, we undertake to supply the Equipment and install the same in Nitra, Ghaziabad mentioned in the tender within the specified periods in Appendix-TF on receipt of written order from the Purchase Committee, NITRA.
- d. If our tender is accepted we will, obtain and arrange:
 1. Transit insurances
 2. Any other statutory obligation, if any, prior of commencement of supply of equipment.
- e. We agree to your right to cancel the order or stop payment with out prejudice to any other right or remedy for the following failures on our part.
 1. Changes to tender are made within Validity Period as specified in Appendix-TF.
 2. Supply and installation of equipment is not commenced within specified period as given in Appendix-TF.
 3. Obligations under(e) above are not fulfilled.
- f. Unless and until a formal agreement/purchase order is prepared and executed ,this tender together with your written acceptance there of, shall constitute a binding contract between us.
- g. We understand that you are not bound to accept the lowest or any tender you may receive.
- h. We agree to make a presentation of the products to be supplied by us, before the Purchase Sub-Committee on the date specified by it.
- i. Fluctuation in foreign exchange rates in respect of the imported equipment shall be borne by the equipment suppliers / authorized agents.
- j. We hereby declare that the rates quoted by us are the lowest rates.

Authorized Signatory
to tenderer

Signature dated
Designation / CapacityName
Address

WITNESS 1

Signature

ADDRESS

Name

DATE

WITNESS 2

Signature

ADDRESS

Name

DATE

APPENDIX - TF

Sr. No.	Particulars	Remarks
1	Validity of Tender	180 days
2	Address, date and time of submission of the Tender Documents.	The Chairman, Purchase Committee, NITRA, Sector-23, Raj Nagar, Ghaziabad, U.P.- 201002, India. (29-05-2026 up to 12.00 PM)
3	Supply, Installation & Demonstration of Instrument/ Machine	Within 60 days from the date of placement of order , failing which order may be cancelled.
4	Period of Warranty/ Performance guarantee of Instrument/ Machine.	Two years with one year AMC
5	Submission of the Programme for delivery.	Within 60 days from the date of the acceptance of the order placed.

SEAL AND SIGNATURE OF TENDERER

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