

Indian Institute of Technology Kanpur
CENTRE FOR NANOSCIENCES

Tender Enquiry No.: CNS/2014-15/FEB/01
Last Date for submission: February 25, 2015

Date: Feb 17, 2015

Contact angle and surface tension/energy analyser

Centre for Nanoscinecs, IIT Kanpur invites sealed quotations in **two bid system** (technical and financial bid separately in sealed envelopes) for a Drop shape analysis System with fully automatic measurements of contact angle, Surface Free Energy and surface & interfacial tension of liquids based on Pendent drop method with all the essential and optional features. The instrument must have a robust design with at least below mentioned specifications:

- 1) **Contact Angle Measurement Range:** 1° to 180°
- 2) **Contact Angle Resolution:** +/- 0.1°
- 3) **Surface Tension Measurement range:** 0.01 to 1000mN/m
- 4) **Surface Tension Resolution:** 0.01 mN/m
- 5) **Camera:** High Speed Camera Module, consisting of
Sensor 1/3" CCD
79 fps (656 × 492 pixel), 135 fps (656 × 246pixel),301 fps (656 × 58 pixel) or similar fps and resolution
- 6) Optical system with **manual zoom(6.5x)** and fine focus or better
- 7) **Illumination:** High Power LED Illumination, monochromatic, Ø 42mm or better with integrated light-blind for small contact angles, Software controlled light intensity
- 8) **Sample stage should be placed on magnetic base and dimension: minimum 100 x 100 mm,** z-Axis, manual with flexible positioning in x/y-direction with 38 mm movement
- 9) **Dosing System: 2 Software Controlled +1 Manual**
2 Syringe Dosing, Software-controlled, for glass & disposable syringes
Resolution: 0.1 µl
Dosing rate: 10-1400 µl/min
1 Manual Syringe Dosing with Caliper, for disposable and glass syringes
- 10) **Needles:** Quantity 30 with different dimensions for contact angle and surface tension measurements
- 11) Software module to determine static and dynamic contact angles, surface free energy, Surface tension and interfacial tension.
- 12) Internal Tilting Table Accuracy 1°

Optional:

- 1) Equipment should be upgradable for Contact Angle measurement in Concave surfaces by Top View distance method (Top View Analyzer)
- 2) **Environmental Chamber:** Temperature Range -10°C to 130°C with external Refrigerated water bath

Guarantee, Warranty, Support and Service

- Must include three years comprehensive warranty on all parts and labour.
- Must include free future software upgrades for the life of the instrument.

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- Company must have a local Application scientist along with service support in India from the manufacturer with a commitment that support would be made available within 48 hrs on request.
- Complete training for all the modes at the time of installation of the system and additional training sessions in the first year for users on request at mutual convenience at no additional cost to IITK.
- The instrument must be upgradable to additional advanced modes at a later stage.

General Terms and conditions:

- Quote should be made in two parts: Technical bid and financial bid separately in sealed envelopes.
- Technical Bid should contain compliance statement of specifications with supporting documents.
- Quotes should have a minimum validity of 60 days
- Financial bids for the product whose technical bid is not acceptable will not be opened. Any quote with the financial bid included in the technical bid will be rejected.
- The sealed envelopes with the quotes should be super-scribed with the enquiry number and whether it is a technical or financial bid.
- The delivery period should be specifically stated.
- Port of Delivery: FOR Destination for Indian Manufacturers and CIF New Delhi in case of foreign manufacturers.
- Maximum educational discounts should be provided.
- Actual numbers of the components may be increased or decrease.
- Delivery time: 4-8 weeks from the date of purchase order.
- Installation: Installation within 10 days after receiving the system at IIT Kanpur The price should be inclusive of full installation on site with full functionality demonstration.
- Standard comprehensive warranty and support should be provided for three years after installation.
- Foreign vendors should have service center and service engineers authorized by them or their subsidiaries in India.

The quotations must reach to us latest by February 25, 2015 at the following address:

Dr. Manish Kulkarni
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