



NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008 (ODISHA)
(An Institute of National Importance under Ministry of HRD, GOI)

NOTICE INVITING TENDER

Tender Notification No: NITR/PW-SR/FP/2020/189

Dated: 25/06/2020

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **Texture Analyser** at NIT Rourkela.

Last date of Submission of Bid : **16/07/2020 by 03:00 PM**

Opening date of Techno-commercial Bid: **17/07/2020 at 03:00 PM**

For Details: http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx

Contact: Prof. Sushil K. Singh, (Principal Investigator)
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Bidding through: <https://eprocure.gov.in/eprocure/app>

Sd/-
REGISTRAR



**NATIONAL INSTITUTE of TECHNOLOGY
ROURKELA – 769 008, ODISHA**

(OPEN TENDER NOTICE NO.: NITR/PW-SR/FP/2020/189

Dated: 25/06/2020

(Procurement of Texture Analyser at NIT Rourkela)

Sl. No.	ITEM NAME	TECHNICAL DESCRIPTION	Quantity
1.	Texture Analyser	<p>Specification:</p> <p>Application:</p> <p>An Instrument for the determination of Texture, effect of viscosity, rheology / stress-strain behaviour, Measurement of hardness, softness and stickiness, brittleness, cutting force, shearing, consistencies and penetration force of Food products.</p> <p>The Instrument should be able to measure hardness, firmness, stress relaxation, chewiness, cohesiveness, elasticity, tenderness, brittleness, freshness etc. Existing application studies for these parameters, conducted on the offered equipment must accompany the quotation.</p> <p>Functional Requirements:</p> <p>(1) Texture Analysing System of load frame of 100Kg with load cell of 100Kg with facility to attach multiple load cells on the same frame. The instrument should have following basic product specifications:</p> <ul style="list-style-type: none">• Capacity: 100Kg• Load cells: 100 Kg• Load cell accuracy: 0.5% of reading• Force Resolution: 0.1g• Distance Resolution: 0.0005mm• Speed Range: 0.01 to 20mm / second• Speed accuracy: better than 0.1%• Touchscreen Data Acquisition Rate: 2000 points per second• Software Data Acquisition rate: 0.1 to 500 points per second• Overall height: 670 mm• Firmware updates: via PC• PC Interface: USB• Load cells should store their unique calibration and identification information in 'onboard' non- volatile memory.• There should be provision for factory and user calibration of force. <p>(2) Instrument should be computer controlled through compatible windows-based software with following features:</p> <ul style="list-style-type: none">• The software must have the facility to modify the distance being traveled by the probe during the test to account for the bend compensation and frame deflection.• The software must have the facility to hold the constant force applied for the duration of the test by either increasing or decreasing the test speed proportionally, differentially or integrally.• The software should detect and then the speed of the Instrument should change proportionally to the product height during the test rather than testing at constant speed.	1 unit

		<ul style="list-style-type: none"> • The software should have the facility to write a macro i.e. an English language programme which enables a user to do routine calculations automatically. • The software should have feature to measure area, gradient, mean, time difference, ratio, travel, count positive peak, count negative peak, dispersion, average drop of, volumic mass, force maxima and force minima. The supplier must confirm categorically how each of these parameters are calculated using the software which is offered. • The software should have the feature to mark events like fracture, first peak, maximum force etc. <p>(3) Texture Analyser should have provision to attach Peltier plate, Powder Flow Analyser and Acoustic detector. A documentary proof is required in this respect.</p> <p>Accessories required with the Instrument:</p> <ol style="list-style-type: none"> 1. Platform for samples 2. Software with above features 3. 75mm Compression plate for general purpose compression tests 4. Cylindrical probes (2mm and 5mm) for penetration test 5. Blade set for cutting and shearing test 6. 36mm cylindrical probe for determination of bread firmness using the AACC (74-09) Standard method 7. Cooked Pasta Rig for firmness of pasta 8. 3-point bend rig for snap test 9. Back extrusion rig for semi liquid material <p>Compatible Computer system (Windows 10) with printer and UPS should be supplied with the instrument to run the software.</p> <p>Mandatory Requirements:</p> <ul style="list-style-type: none"> • The supplier will be required to install the equipment and accessories completely in place and also demonstrate the Instrument and the software vis-à-vis the tender specifications. Training will also be required to be given to the users on the operation and applications on different food products, at the time of installation. • The manufacturer must have supplied sufficient number of Texture Analysers for Food and Agricultural applications. 	
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1. **Quantity required: As mentioned above (All information provided in technical specification)**
2. **Delivery: Within 90 days from the date of purchase order.**
3. **Last Date of submission of Bid: 16/07/2020 by 03:00 PM**
4. **Date of opening of Techno-commercial bid: 17/07/2020 at 03:00 PM**
5. The firm should not have been blacklisted at any time.
6. The submission of following bids by the tender should be through <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines as per the portal.

PROCUREMENT OF TEXTURE ANALYSER

(Open Tender Notice No.: NITR/PW-SR/FP/2020/189; Dated- 25/06/2020)
Due on 16/07/2020 by 03:00 PM

7. Liquidated damage clause will be charged for any delay in supply of goods.
8. The validity of the tender shall be **90 days** from the date of opening of the bids.
9. Detailed advertisement including all tender documents is also available in our website at http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx.
10. NIT reserves the right to qualify or deny pre-qualification of any or all applicants without assigning any reasons.

Sd/-
REGISTRAR
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-2462021