

MAHARSHI DAYANAND UNIVERSITY ROHTAK

TENDER NOTICE

Sealed Tenders are invited subscribed as "Tender for Equipments" for supply of "Rapid Visco-Analyser" alongwith earnest money equal to 2% of the total amount involved in the shape of Bank Draft in favour of Finance Officer, M.D. University, Rohtak so as to reach the Department of Food Technology upto 27th December, 2011.

For detailed terms & Condition, visit the University Website www.mdurohtak.ac.in.

REGISTRAR

NOT TO BE PUBLISHED IN PRESS (only for display on website & to supply to the firms)

Specifications of Rapid Visco-Analyser

Equipment required for rapid viscosity profile measurements and **starch pasting characteristics** of flour and grain quality, native starches, modified starches and starchy samples, formulated foods (e.g. sauce, ketchup, gravy, dressing, mayonnaise, soup, dairy beverages) other ingredients and foods (e.g. hydrocolloids & proteins), cooked and extruded foods (e.g. ready to eat breakfast cereals, snack foods, pet foods, fish feeds and animal feeds), meltability tests (e.g. process cheese, chocolate and confectionery) as per approved **AACC/ICC standards** in products like wheat, rice, potatoes, corn, rye flour etc. The instrument should also be capable of the following:

- Time for one test for Starch pasting characteristics: 12 to 15 min
- Time for alpha amylase activity test max 5 min
- **Sample requirement of 3-3.5 gm depending on sample.**
- **Quickly determining pasting characteristics of native and modified starches as per AACC Method 76-21 and ICC Standard No. 162).**
- **starch degradation during germination**
- **tool for monitoring the overall quality of malted barley and wheat adjunct additions**
- Assessing weather damage and extent of sprouting in grains.
- Analyzing enzyme activity as stirring number in cooked viscous starch, grains, flour, potatoes, noodles, rice, barley, wheat, sorghum etc.
- Accessing effects of baking ingredients viz. improvers, emulsifiers etc.
- Differentiating between different rice and other grain varieties.
- Analyzing processing effects like degree of cook on quality of extruded products, snack foods etc..
- Analysing properties of Whey Protein Concentrates, Skim milk Powders.
- Analysing other dairy products like curd, yoghurt, cheese etc.
- Analyzing protein network functionality and gelation characteristics

- Analysing Modified starches, cook dent foods.

Note: Instrument should be a dedicated instrument for Pasting Characteristics of different flours/starches only.

Instrument should have following features:

- Instrument should to have single sample holder.
- Apply variable temperature and shear rates to sample while continuously monitoring sample viscosity.
- Temperature range~ between 0- 99 deg C
- Temperature accuracy: minimum +/-0.2° C at 25° C
- Heating/Cooling rate: min upto 14° C/minute (variable)
- Speed Range: Infinity variable 20-1000 rpm (computer controlled)
- Speed Accuracy: minimum +/- 1% at 160 rpm
- Viscosity range: Between 100 to 12,000 cP at 80 rpm
- Viscosity Accuracy: +/-2.5% for S2000 Oil nom.5000 cP
- Time for one test for Starch pasting characteristics: 12 to 15 min
- Time for alpha amylase activity test max 5 min
- Display: 4 line Vacuum Florescent.
- Computer Interface: RS232
- **Software should be capable to help design multi step shear and temp profiles, linked analysis, graph and report functions.**

The Instrument must meet International standards like ICC, AACC and RACI.* Specific confirmation with documentary evidence must accompany the quotation.

General Requirements

- (1) The supplier must have supplied similar Instrument in India and abroad. The suppliers must be a certified dealer of the instrument for that particular make. The list of users should be sent along with the quotation and also copies of Research Papers published using the quoted Instrument for the applications mentioned above. The supplier must also provide along with the quotation the list of organizations that have purchased the quoted Instrument during last two years. The complete original brochure of the instrument with full details must be enclosed along with.

TERMS AND CONDITIONS GOVERNING THE TENDERS FOR THE SUPPLY

1. Every tender shall be accompanied by the earnest money equal to 2 % of the involved value. The earnest money should be deposited through Bank Draft in favour of the Finance Officer, M. D. University, Rohtak, payable at the State Bank of India, Maharshi Dayanand University, Rohtak.
2. The tender received without earnest money or after the due date shall not be entertained except with the special approval of the competent authorities.
3. The supplies shall be executed within the time specified in the supply order which may be extended by the Registrar on an application of the supplier explaining reasons/circumstances due to which time limit could not be adhered to. In the event of the supplier failing to supply the material within time, he shall be liable to pay as compensation an amount equal to one percent or such small amount as the Registrar may decide on the said amount of the contract, for every day that the quantity remains incomplete, provided that the entire amount of compensation shall not exceed 10 percent of the total amount of the contract. An appeal against these orders shall however lie with the Vice-Chancellor whose decision shall be final.
4. In case the contractor backs out of his contract, the earnest money deposited by him shall be forfeited besides any other action as may be considered necessary by the Vice-Chancellor.
5. All the charges including packing, forwarding and installation, taxes and other levies should be specified in the tender. The charges etc. not specified in the tender shall not be paid.
6. The quantity of material/supplies shall be subject to increase on the tendered rates. This increase shall be communicated by the University within 30 days of acceptance of the tender.
7. Supplies shall be made as per the schedule and within such time as is indicated in the supply order.
8. 100% payment will be made on receipt and inspection of goods to ensure the specifications and their good condition.
9. The rates accepted by the University shall be applicable up to 31.3.2012 and the supplier shall have to make supply during the period as and when required.
10. The tenders shall be opened by the Purchase Committee in the presence of contractor/supplier and the Committee reserves the right for negotiation thereafter if considered necessary.
11. The Registrar reserves the right to reject or accept any offer without assigning any reasons.
12. All disputes subject to **Rohtak jurisdiction.**

13. Guarantee / warrantee of items must be mentioned.
14. **The University stands exempted from the payment of Central Excise Duty/Custom Duty. The rates be quoted keeping that fact in view. Necessary certificate will be provided by the University.**
15. No tender documents will be issued and rates are to be offered on company's letter pad.
16. If a holiday occurs on the opening day, the tenders will be opened on the next working day.
17. The tenders received not in proper sealed cover shall not be considered and will be liable for rejection in a straightway.
18. Rates for each item are to be quoted in a separate letter head and are to be sent in a separate cover.

REGISTRAR
M.D. University, Rohtak