

**Department of Civil Engineering  
Z.H.College of Engineering & Technology  
Aligarh Muslim University, Aligarh 202002 (UP)**

D. No. 880/CED  
-29/4/2014

**NOT ICE INVITING TENDER (NIT)**  
(Purchase of Kjeldahl Apparatus)

Sealed quotations are invited from authorized suppliers for supply of Kjeldahl Apparatus (1 No.)

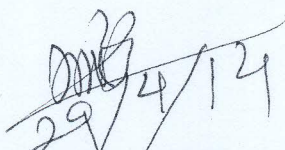
Application: Environmental / Wastewater Analysis (Kjeldahl nitrogen, ammonium nitrogen, TKN)

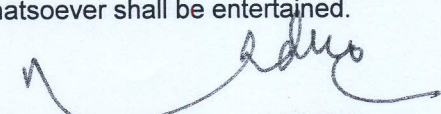
Minimum Specifications	
A) Digestion Unit	B) Distillation Unit
<p>Digestion Unit for minimum six samples with an Block Digestion and a tight suction module to prevent the escape of acid vapor during the digestion. Should be robust with tube holders made from acid-resistant stainless steel</p> <ol style="list-style-type: none"> <li>1. Heating levels of 1 to 10 to give accurate and reproducible heat.</li> <li>2. Must have proper ceramic insulation cover, top of the oven to conserve heat</li> <li>3. Capable of six min 250 ml tubes and have constricted condensation zone.</li> <li>4. Thickness of glass tubes at least 2.2mm made up of Glass.</li> <li>5. Should be supplied with suction module, holder and rack for min six 300ml digestion tubes</li> <li>6. Temp Range: up 450°C or more</li> <li>7. The same unit should be able to upgraded to 500ml tube, if required.</li> <li>8. It should be supplied with water jet pump, exhaust manifold and rack system</li> </ol>	<ol style="list-style-type: none"> <li>1. Compact Distillation Unit for environmental application including nitrogen determination, such as Kjeldahl. TKN (Total Kjeldahl Nitrogen), in accordance with official methods (AOAC, EPA, ISO and DIN).</li> <li>2. High performance steam generator for efficient steam distillation</li> <li>3. Should be supplied with condensation zone.</li> <li>4. Recovery rate <math>\leq 99.5\%</math></li> <li>5. Reproducibility <math>\geq 1\%</math></li> <li>6. Detection Limit <math>\geq 0.1\text{mg Nitrogen}</math></li> <li>7. Compact Stand alone instrument using minimum space.</li> <li>8. Digital LCD display</li> <li>9. Easy to use key board.</li> <li>10. Integrated timer.</li> <li>11. Recall last dosage</li> <li>12. Alkali addition.</li> <li>13. Protective door sensor</li> <li>14. Tube in place sensor</li> <li>15. Cooling water control</li> <li>16. Drip tray to contain spillage</li> <li>17. Equipped with a service door with front access.</li> <li>18. Should be supplied with 10 liters (2 nos.) supply tanks for NaOH and D.W.</li> <li>19. Suitable Chamber</li> </ol>
<p><b>Recommended Makes: Foss/Gerhardt/Velp</b></p>	

System should be operative on Mains Voltage 230 V, Frequency 50/60 Hz. Minimum *warranty* of the system should be 2 years. AMC (annual maintenance contract after warranty) may be quoted separately. Bidder should give detailed tech specifications of the machine, users list, certificates etc. and financial quote.

The sealed quotations are to be submitted in single envelope system. This envelope should be further enclosed in an outer envelope, which should also be sealed and addressed to, clearly mentioning on top of the envelope "Quotations for Kjeldahl Apparatus".

Quotations duly signed & stamped by Authorized Representative(s) should reach the office by 3.30PM on or before 10/05/2014. Quotations shall be opened on 10/05/2014 at 4:00 PM in the presence of authorized representative (if wish so). If needed, the suppliers may be asked to make a technical presentation before the committee. Committee shall do the technical evaluation of the bids and the recommendations of the purchase committee shall be considered as final. University reserves the right to accept or reject any of the offers without assigning any reasons. No claim whatsoever shall be entertained.

  
29/4/14  
**CHAIRMAN**  
Civil Engg. Deptt.  
A.M.U., Aligarh

  
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NOTE: The rate quoted in the quotation should be valid upto 31.08.14