

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

D.No. 11/CED
04.01.2014

Purchase of Kjeldahl Apparatus (Qty = One No.)

Sealed quotations are invited from authorized suppliers for supply of Kjeldahl Apparatus.

Application: Environmental / Wastewater Analysis

Minimum Specifications:	
A) Digestion Unit	B) Distillation Unit
<p>Digestion Unit for minimum six samples with an adjustable IR-heating/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"> 1. Heating levels of 1 to 10 to give accurate and reproducible heat. 2. Must have proper ceramic insulation cover, top of the oven to conserve heat 3. Capable of six 300 ml tubes of diameter 48 mm and have constricted condensation zone. 4. Thickness of glass tubes at least 2.2mm made up of Glass. 5. Should be supplied with suction module, holder and rack for six 300ml digestion tubes 6. Temp Range: up to 500°C or more 7. The same unit should be able to up-graded to 500ml tube, if required. 8. It should be supplied with water jet pump. 	<ol style="list-style-type: none"> 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). 2. High performance steam generator for efficient steam distillation 3. Should be supplied with condensation zone. 4. Recovery rate $\geq 99.5\%$ 5. Reproducibility $\leq 1\%$ 6. Detection Limit $\geq 0.1\text{mg Nitrogen}$ 7. Compact Stand alone instrument using minimum space. 8. LCD display 9. Easy to use key board. 10. Integrated timer. 11. Recall last dosage 12. Alkali addition. 13. Protective door sensor 14. Tube in place sensor 15. Cooling water control 16. Drip tray to contain spillage 17. Distillation process should be visible through transparent distillation area. 18. Equipped with a service door with front access. 19. Automatic Titrator (optional) 20. Should be supplied with 10 liters (2 nos.) supply tanks for NaoH, and Distilled water.
<p>Recommended Makes: <i>Foss/Buchi/Gerhardt or Equivalent (Only International Brands)</i></p>	

System should be operative on Mains voltage 230 V, Frequency 50/60 Hz. Min warranty of the system should be 2 years. AMC (annual maintenance contract after warranty) and item no. 19 of B may be quoted separately.

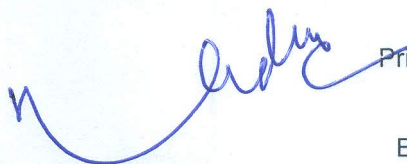
The sealed Quotations are to be submitted in two Separate envelopes;

A for Technical Quote (Detailed Tech Specifications, Users List etc.) &

B for Financial Quote

Both these envelopes 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 4.00PM on 15/01/2014. Technical Quote shall be opened on 18/01/2014 at 3:30 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. University reserves the right to accept or reject any of the offers without assigning any reasons.



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