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**DEPARTMENT OF FACTORIES & BOILERS**

**No.A3/4124/F&B/2015**

“SURAKSHA BHAVAN”  
OFFICE OF THE DIRECTOR OF  
FACTORIES AND BOILERS,  
MEDICAL COLLEGE P.O.,  
THIRUVANANTHAPURAM,  
DATED: 14-03-2016.  
PHONE:0471– 2441597,2440974.

**e-TENDER NOTICE**

Online tenders are invited from the manufactures and authorized dealers for the supply and installation of the following high quality branded equipments separately.

Sl. No.	Item	Quantity	Estimate Amount	EMD	Cost of Tender Form
1	Autotitrator for testing Acidity	1	10 Lakh	1 % of the cost of Item	Rs.1575

Last date for the receipt of filled up Tenders : 4 PM on 21-03-2016  
Opening Tender : 10 AM on 26-03-2016

Tender details also available from the Director of Factories & Boilers, Thiruvananthapuram on all working days till 19-03-2016, 4 PM. The under signed reserves the right to reject the tender without assigning any reason thereof. The tender notification is also available in the official Website: [www.fabkerala.gov.in](http://www.fabkerala.gov.in). Tender Form and Terms & Conditions may be downloaded from [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in).

Sd/-  
DIRECTOR OF FACTORIES & BOILERS

## Specifications

### **I. Autotitrator for testing Acidity (As per IS 1448 [P:2]: 1967)**

1. The Instrument should be standalone type. Should Conform to IS 1448 [P:2]: 1967
2. The potentiometric titrator should have the capability and dedicated modes to perform all types of potentiometric titrations like, acid-base, non-aqueous, argentometric, redox, complexometric and KF titrations.(AS PER METHOD P:2)
3. The instrument should have motor driven Piston burette.
4. The instrument should have a high burette resolution of 1/10,000 of burette volume.
5. The instrument should have Live Titration Curve Display.
6. The instrument should be operational either with magnetic stirrer or rod stirrer. The instrument should be capable of controlling stirrer speed. Stirrer should have capability of rotating in both clockwise & anti-clock wise direction.
7. The instrument should have facility for Method & Result storage without connecting to PC. Should be able to store at least about 100 Methods and about 1000 results.
8. The instrument should have pH measurement capability with 5 point pH calibration.
9. The instrument should have Automatic Burette Recognition feature wherein once connected instrument knows burette volume. Burettes should be Intelligent Burettes which can store important titrant data like Titer details.
10. The instrument should have the possibility for direct connection of Balances, of at least three international manufacturers. Please list the compatible balances.
11. The instrument should have the possibility for direct connection of USB Keyboard, Printer, USB Mouse & barcode reader for easy handling.
12. The instrument should have the feature for Limit control for the results.
13. The instrument should have the possibility of using unlimited number of Burettes of Volume 1, 5, 10, 20 and 50 ml allowing maximum flexibility if required.
14. The instrument should have the facility for automation, for the analysis of multiple samples, if required in future.
15. Live data entries like sample weight, stop criteria should be possible, even when the titration is in progress.
16. Electrodes and accessories for the determination of chloride should be given along with the instrument.
17. Vendor should quote necessary accessories, spares, consumables etc for trouble free operation.
18. The vendor should confirm that the quoted model is the latest one and spares are available for a minimum period of TEN years.
19. Instrument to be guaranteed for minimum 2 years & AMC thereafter. Conditions of after sales support shall also be mentioned.
20. List of Indian users, preferably in the field of Petroleum/Petrochemicals, to be given.

21. Copies of Manual (Maintenance & operation) in English to be supplied (2 nos).
22. Installation, Method development including troubleshooting, training etc, wherever applicable, is in the scope of the vendor.
23. Space, Environmental & Power requirement of the Instrument to be mentioned in the quotation.
24. Printed catalogues giving detailed specification & picture of the Instrument is to be attached in the quotation.
25. Hardware & software capabilities of the Instrument to be mentioned in the quotation.
26. Wherever applicable, NIST traceable certificates to be quoted by the vendor.
27. Delivery period & pre installation requirement to be clearly mentioned in the quotation.
28. Accessories, spares and consumables for a 2 year period to supplied with the instrument.
29. N2- Gas cylinder and regulating system for manual titration method shall also be quoted.
30. Warranty 3 years
31. Validity Period, Model, Mode of Payment, Supply Period, After Sales and Service mentioned in e-tender.

**Sd/-**

**Director of Factories and Boilers**