



**North Eastern Hill University
Shillong 793022**

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Dr. Marappan Velusamy
Associate Professor
Phone: 9089623300
email: mvelusamy@gmail.com

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NIT for purchase of Rotary Evaporator

NOTICE INVITING TENDER

Sealed quotations (with separate technical and price bids) are invited from reputed manufacturers/ authorized dealers for supply of instruments for the DST-SERB funded project in the Department of Chemistry, North-Eastern Hill University, Shillong. The instruments along with specifications are listed in the Annexure-I

General terms and conditions

- [1] The tender notice may be withdrawn at any time without assigning any reason thereof.
- [2] The decision of the Departmental Purchase Committee in this matter is final.
- [3] DSIR certificate, road permit, etc. will be provided by the department as and when required.
- [4] The instrument along with required accessories should be delivered in good and working conditions, and installed at the Dept. of Chemistry, NEHU, Shillong without any additional cost.
- [5] The quotation should be drawn in the name of 'Dr. Marappan Velusamy, DST-SERB funded project, Principal Investigator, Department of Chemistry, NEHU, Shillong – 793022, Meghalaya, Email: mvelusamy@gmail.com
- [6] The instrument should have three years warranty.
- [7] A letter from the Principal should also be furnished guarantying that all the terms and conditions agreed by the supplier as written in the quotation as well as in the tender notice will be taken care of by the Principal in the event the supplier departs the Principal.
- [8] Payments terms must be either Letter of Credit or Wire transfer after delivery of the consignment.
- [9] Incomplete offer will be summarily rejected.

[10] The last date submission of quotation is 25/05/2018 by 5:00 pm. Quotation received after the due date will not be entertained.

Sd/-
Dr. Marappan Velusamy,
DST-SERB funded project,
Principal Investigator,
Department of Chemistry
North-Eastern Hill University
Shillong - 793022
Email: mvelusamy@gmail.com

Annexure-I

Specifications:

(i). Rotavapor (1 No)

- 1) Electronic lift with provisions for automatic lifting of the flask in case of power failure.
- 2) Rotation speed up to 280 rpm or better with microprocessor control.
- 3) All glass components should be made of Borosilicate and Cooling surface area of 1500 cm² or better.
- 4) Multifunctional combi-clip for easy removal and fixation of evaporating flask
- 5) Adjustable immersion angle for the use of different flask.
- 6) Should be supplied with P+G coated Vertical Glass Assembly, condensate trap and PTFE stop cock.
- 7) Digital display of set and actual bath temperature, rotation speed and lift position.
- 8) Microprocessor controlled bath temperature ranging from ambient to 220 °C with an accuracy of $\pm 1^{\circ}\text{C}$.
- 9) Automatic over heat cut-off protection.
- 10) Heating bath capacity- 5 Litres or better.
- 11) Evaporating flask from 50-5000 mL can be used on the same joint adapter without additional connections.
- 12) 1 Litre evaporating flask and receiving flask should be provided in standard scope of supply.

(ii) Vacuum Controller (1 No)

- 1) Control unit with LCD display for centrally controlling all process parameters of a rotavapor like rotation speed, bath and coolant temperature, pressure, process time etc.
- 2) Manual management of pressure settings and aeration with timer function.

- 3) Should have facility to program clock-wise and anti-clockwise rotation of evaporating flask for a defined time range.
- 4) Integrated aeration valve and precision pressure sensor.
- 5) Automatic aeration when pressure is above 1400 bar.
- 6) Should have integrated solvent database for setting up dynamic distillation conditions.
- 7) Should have facility of integrated leak test to check possible leaks.
- 8) Measuring range: 1400- 0 mbar; Control range: ambient to 0 mbar.

(iii) Vacuum Pump (1 No)

- 1) Single stroke Speed control vacuum pump with a flow rate of 1.8 m³/h.
- 2) Chemically resistant diaphragm made of PTFE.
- 3) Ultimate vacuum: 5 mbar or better.
- 4) Should be supplied with silencer.
- 5) Should be speed controlled pump and stops after reaching desired vacuum pressure
- 6) Woulff bottle included.

(iv) Re-circulating Chiller (1 No)

- (1) Compact and Robust Re-circulating Chiller with a cooling capacity of 440 Watts at 10° C or better.
- (2) Should have automatic stop function when the distillation process is terminated.
- (3) Temperature Range: -10 to +25 °C.
- (4) Flow rate: 2.5 litres/min at 0.6 bar and tank volume: 3 Litres or better.
- (5) Coolant: CFC Free.