

Requirement: Rotary Evaporator, Vacuum Pump and Chiller with Three years warranty

Quotations are requested from suppliers for the above item. Please send your quotations in a sealed envelope to the undersigned by 10 Jan, 2015 to the undersigned in a sealed envelope

Technical specification for Rotary Evaporator, Vacuum Pump and Chiller

A. Specification for rotary evaporator

Vertical condenser for all standard distillations for smallest space with motorized lift.
Auto Lift in case of power loss.

Evaporating flasks and receiving flask 1000ml and vapour tubes should be supplied with standard ground join NS 29/32,

The coupling ring and the flange on the condenser side of the drive should be made of PPS (PolyPhenylene Sulfide), for robustness and with chemical resistance.

All glassware set should feature GL 10 thread

Should have long life graphite filled PTFE vacuum seal

With non-sticking quick release vapour tube for easy cleaning, vapour tube should have for fast distillation rates up to 1200 ml (H₂O)/hour

Should have integrated/non integrated vacuum controller

With convenient large dial controls for adjustments of rotation speed from 20 – 270 rpm

With microprocessor controlled heating bath temperature 20° C – 180° C with digital display of bath temperature with heating capacity of 1300 W

The heating bath should be adjusted horizontally up to 200mm and should offer efficient space to accommodate evaporating flasks from 50ml to 4000ml

Should have LCD digital graphic display which should feature all parameters (bath temperature, vacuum pressure both set and actual, temperature and pressure ramping), with integrated vacuum controller.

Should have USB Interface for data management with software

Three In-Built Programming feature, SET pressure, AUTO easy, AUTO accurate for AUTO distillation.

AUTO easy Function should have capability to find boiling point and perform distillation automatically

Should be able to set and program the 9 most common applications into memory

Should be able to program the required vacuum change in a ramp

Should have process timer which can allow unattended operations

Should have auto start and stop with just one press of a button

Heating bath should have non-slip safety handles for safe and easy transport of bath

Should have over heat cut-off protection at 220° C

Heating bath should be constructed of an insulated double wall for user protection against burns and scalding.

Material of construction of heating bath should 1.4404 / ASIS 316 L (L = Electro-polished)

Volume of Heating Bath: 4.5 Ltrs

Set bath temperature on display accuracy: +/- 1° C

Protection Class: IP 67

Condenser surface area: 120 cm²

Dimensions: 393mm L x 411mm W

B. Specification for vacuum pump:

Two –Stage diaphragm pump made from chemically resistant materials,

High Suction capacity 1.7 m³/h

The vacuum pump should achieve an ultimate vacuum of 7 mbar.

Suction capacity for upto 3 Rotary evaporators at the same time.

Chiller :

Minimal bench space, Temperature range from -10 °C to +40 °C

Temperature control accuracy of ±0.5 °C

Display for setting temperature and reading out actual temperature

Maximum cooling capacity of 420 W

Note :

1. Since vacuum pump and chiller will be connected and used only for rotavapor, all three items (rotavapor, chiller and vacuum pump) should be quoted by same vendor.
2. Prices could be quoted in Indian rupees/foreign currency and as much as possible should include the cost of shipping to IIT Kanpur.

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