



सी एस आई आर - केंद्रीय नमक व समुद्री रसायन अनुसंधान संस्थान  
गिजूभाई बधेका मार्ग , भावनगर -364002 गुजरात ( भारत )  
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No- IMP(1218)/50/18-19/PB/T-59

Date- 12/03/2019

To,

**NOTICE INVITING TENDER THROUGH E-PROCUREMENT**

Director, CSIR CSMCRI invites Online Bids in **Two Bid format** for procurement of the following item (s)

SI No	Description of item	Quantity
1	Laboratory Freeze dryer (Specification as per attached sheet)	01

Address for Communication :	The Director CSIR - Central salt & marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar, Gujrat. Email:-spo@csmcri.res.in, purchase.import@csmcri.res.in
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Stores & Purchase Officer

**NOTE:**

1. The tender form. Bid documents may be downloaded from the website:  
<https://etenders.gov.in>
2. Bids must be mandatorily submitted online through Central Public Procurement Portal-  
<https://etenders.gov.in>
3. Tender ID: 2019\_CSIR\_24303\_1
4. Tender Reference number: IMP(1218)/50/18-19/PB/T-59

## Specifications for Laboratory Freeze Dryer:

Application: required for freeze drying of aqueous as well as samples with low eutectic points

Ice condenser chamber/collector with internal condenser coils should be made up of stainless steel (316L).

Ice condenser capacity: atleast 6 liters

Ice capacity: 4 liters or 4 kg or water in 24 hours

HCFC/CFC free refrigeration system to attain temperature of minus 85°C

The system should possess integrated hot gas function for rapid defrosting

Drying chamber: Stainless steel chamber with 12 connection valves (3/4 inch) for connecting flasks with gaskets

The equipment should possess a robust controller which is programmable for control of vacuum and other process parameters. A display of ice condenser temperature, vacuum other process parameters is essential.

Vacuum pump for use with water and other harsh solvents for obtaining an ultimate vacuum of  $2 \times 10^{-3}$  mBar:

Suction capacity: displacement of atleast 5.8 cubic meter per hour

power requirement: 230 V50/60Hz

Exhaust filter with automatic oil return feature is desirable

vacuum hose of atleast 35 inches length

Valve to prevents back streaming of oil during abrupt stopping of the pump is desirable.

Secondary trap for removing condensable vapours before it contaminates the oil may also be quoted.

Flasks: wide neck flask filter bottles complete with cap, adapter 3/4 inch of the following size may be quoted

1. 75±5 ml – 1 no.

2. 150 ml – 1 no.

3. 300 ml – 1 no

4. 600 ml – 4 no

5. 1200 ml – 1 no

Desirable:

Low noise level below 54dB

USB Ethernet connection of data is desirable

Features involved in protection of vacuum pump by turning it off upon detection of moisture in collection chamber

Vacuum pump maintenance alert

Security lock-out

Purge valve

Warranty- atleast one year

Optional:

Vacuum pump oil- 1 liter and vacuum grease may be quoted optionally

Stainless steel manifold with the capacity to attach 12 flasks and clear chamber with 12 valves (acrylic) may be quoted optionally

Flask wide neck with size less than 75 ml

Filter paper insert

Spare rubber caps