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Quotation Request Notice

Sealed quotations are invited from dealers/distributors by 'Glove Box' of at least following specifications. The quote should be submitted to the Department of Chemical Engineering, IIT Kanpur by 25.08.2012.

Enquiry No.: Tender No: 10/CHE/SS

Opening Date: 17.08.2012

Closing Date: 25.08.2012

GLOVEBOX in Stainless Steel (US 304L):

Dimensions L/H/D: 1200 x 900 x 700 mm

- Automatic Stainless Steel vacuum chamber Ø 400, electropolished, length 600 mm
(on the right or left side)

- 1 leaktight electrical feedthrough Bi + T 220V

- 6 blanket leaktight feedthrough ISO KF40

- Automatic pressure control

- Circulator with variable flow

- Purification Capacity: O₂ = 20L; H₂O = 960g

- Interface with touch panel

Glove ring: 220 mm diameter, PP

Gloves: Butyl – Hypalon, ambidextrous, size 8.5

Piping: Stainless Steel X2CrNi 1809 (US 304L).

Piping: All piping in stainless steel.

Lightening: LED

Shelves: 3

Purification

Process: Closed loop inert gas circulation, regenerable purifying loads

Purification Unit: Independent module P (sys)

Arrangement right or left side of the glovebox.

Pipes & Reactors: Stainless Steel (US 304 L)

Purification: 1 purification column for H₂O and/or O₂.

Performance: H₂O < 1ppm, O₂ < 1 ppm

Measures (O₂) & (H₂O): Independent analysis circuit for easy maintenance and calibration and without pollution.

Purification flow: From 0 - 30 cu. m/hr (ΔP :20mbar)

Blower: Centrifugal Blower single stage, in a tight box,

Vacuum Chamber: Manual with 3 way valve.

Connection: ISO KF standard

Pressure Control: Automatic, independent of vacuum pump

User Interface: Touch panel

Display: O₂, H₂O, Pressure

Control: Purging, Regeneration & Purification

Visual alarm for O₂ & H₂O level

Sound Level: 49 dB

Cooling System: Please quote as per requirement.

Regeneration Process: Automatic, Inlet and outlet regeneration gas through electrovalves.

Heating: Integrated temperature regulation controlled through automation and temperature cut – out.

Tightness: Leak rate < 10⁻⁵ mbar.L.per sec.

Regeneration: 95% N₂ or Ar + 5% H₂.

Inclined Toughened Glass FRONT PANEL. Thickness 10 mm

MINI ANTECHAMBER: Dia120 - 150 mm Length 400mm,

Quick lock doors, control through a 3 – way hand valve.

2 stage Vacuum Pump, 12 Cu. m/hr. With mist eliminate

O₂ ANALYZER

Measurement and analysis range: 0 – 1000 or more

Electronics: Integrated microprocessor control, selection of ranges, calibration. Data Readings: 2 wire loop powered connection via a 4-20 mA Analog output.

Accuracy: +/- 1 ppm in full range.

Resolution: +/- 0.1 in full range

H₂O ANALYZER, Measuring range: 0 – 1000 ppm or more

. Calibration: Calibration certificate traceable to international standards.

Electronics: Integrated microprocessor, display on touch screen.

Data Readings: 3 wire loop powered connection via a 4-20 mA

Analog output.

Accuracy: +/- 1 ppm in full range.

Resolution: +/- 0.1 in full range

HEPA FILTER. H13, FLOW, 50 Cu. m/hr.

SOLVENTS TRAPPING System: High capacity external module, activated charcoal load 6 kg

Back connection KF40 for easy replacement. Zero pollution swap charges of the purification/conditioning system in vacuum conditions. Engine, piping, by-pass and 3 way valves, in Stainless Steel 304L. Efficiency and autonomy

FREEZER – 35 to -40°C, with racks.

Storage capacity: 25-30 Litres.

4 BANANA Ø4 /NW40 FEEDTHROUGH

BNC 50 OHMS FEEDTHROUGH

Optical microscope

Technical specifications of Inverted tissue culture Microscope (Binocular)

- Transmitted illumination 12V-35Watts Halogen or LED
- Should have quintuple nose piece to accommodate various objective magnifications
- Phase contrast condenser should be integral part of the configuration.

- Mechanical stage to accommodate various tissue culture flasks, multi well plates and Petri dishes.
- Plan achromat objective 10X with Phase contrast, long working distance Plan Achromat objective 20x with Phase and Long working Distance Plan Achromat objective 40X with Phase.
- Should have higher field of view 21-22mm with 10X Eye pieces
- Should be quoted with a binocular tube alternatively provision to hook camera in future without any up gradation or change in Tube.
- The microscope frame should be upgradable to 100HG fluorescence, fluorescence turret to accommodate minimum three fluorescence filters and one empty position for Phase contrast /BF at any point of time in future

CO₂ incubator

SPECIFICATIONS OF STACKABLE CO₂ INCUBATOR

- Microprocessor controlled 170 Ltr direct heat (air-jacketed) stackable CO₂ Incubator with High Temperature Decontamination facility .
- It should have six-sided direct heating with fanless, gentle convection circulation to provide stable temperature control, excellent uniformity and rapid recovery with no over shoot.
- It should have CO₂ control range from 0.2 to 20% with control accuracy and uniformity of $\pm 0.1\%$ and should have rapid recovery of at least 0.7% per minutes.
- It should have Infra-red (IR) CO₂ sensor with programmable auto-zero function provide superior accuracy & stability. Its auto-zero function automatically adjust IR Sensor base line for optimum accuracy & operational security. No need for manual measurement or operators intervention.
- It should come with minimum 3 adjustable height shelves & humidity reservoir (removable) to achieve at least 95% RH.
- It should have independent door heater eliminate condensation on inner door surface.
- It should have large 12x6.5cm easily viewable backlit display screen provide both digital and real time data graphing and status etc. etc.
- It should have on board built-in diagnostic to help to identify system status and expedite on-site services.
- It should have comprehensive two level alarm systems includes audio & screen displayed alarms for system status, with programmable alarms for CO₂ and temp set points, delays, duration and more.
- It should have HEPA filter on CO₂ inlet.
- It should have non-volatile memory which must guarantee data integrity regardless of length of time or frequency of power interruption.
- It should have following additional safety such as back-up microprocessor, separate over temperature cut-out, alarms setpoint reset automatically, password protection etc. etc.
- It should have RS-232 option.
- It should come with gas cylinders with regulator for proper function of the system .
- It should be ISO 9001 & CE Certification.