

**EN**

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Enquiry Ref No. IITH/STORES/Chy/Sara/2011/069

Date: 30.11.2011

M/s.

Due Date : 15.12.2011

Dear Sirs,

Please arrange to quote for the following items, stating the Name of the item, Brand/Make, Price discount if any, taxes applicable, warranty, commissioning at our place etc, and F.O.R. delivery to IIT Hyderabad, Ordnance Factory Campus, Yeddumailaram.

S.No	Item Description	Qty
01	Lab Funiture for WET LAN (As per Specification & Design Enclosed	01 no

1. Quotations are invited for the various items shown below / overleaf / enclosed list.
2. The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. If the item is under DGS & D Rate contract. Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send the copy of R.C (Please note that we are not Direct Demanding Officers)
4. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
5. Local Firms: Quotations should be for free delivery to this institute. If Quotations are for Ex-Godown, delivery charges should be indicated separately.

Your's Faithfully

Stores Officer
IIT Hyderabad

For Tender specification Contact:
Dr. D.S.Sharada
Assistant Professor, Dept of chemistry,
Phone : 040 2301 7058, Email: sharada@iith.ac.in

Specifications & Design

I. LAB FURNITURE FOR WET LAB

GENERAL POINTS:

1. Vendor should submit specifications comparative statement along with the quotation.
2. Vendor shall furnish, as part of its bid, latest client list, documents establishing the vendors eligibility to bid and its qualification to perform the contract if its bid is accepted.
3. Vendor should note that supply and installation of laboratory furniture includes delivery to IIT, Hyd, unloading the consignment and transporting it from the place of storage to the installation site.
4. Vendor should take care of supplying, installation and final connections of all utility service outlet accessory fittings (including consumables) required for the entire civil, electrical and plumbing work within the laboratory as identified on drawings and mentioned in detailed specifications (which includes, entire work related to Fume hood installation like plumbing utilities, exhaust duct work and equipment, electrical utilities and final connections to fume hood).
5. **Only utility lines (water, drain) and electrical cabling** up to fume hood, island and wall benches will be provided by us as required. Single phase and three phase power will be provided by us wherever needed within the scope of work.
6. Vendor must make sure that entire laboratory furniture (fume hood, island bench, wall bench) is provided with continues under bench cabinet modules (having drawers and shutters with adjustable shelf inside) without any leg space and distance between the under bench storage module and the floor, for entire laboratory furniture should be approx. 120 mm.
7. Vendor should supply modular type lab furniture, which are aesthetically finished on all sides with features that help in easy access for any services if required, allows the flexibility on reconfigurations based on needs (expansion or shifting of the lab furniture).
8. Vendor should supply Legrand/Anchor/North west made electrical outlets.
9. Preferred color for the laboratory furniture is a combination of ivory and lista blue.

10. Vendor must submit the samples if asked for, to review the color, texture, pattern and quality.
11. Vendor should make sure that all the products must carry a warranty for materials and workmanship for 1 year.
12. Before submission of bids, vendors are advised to pay a site visit to have firsthand information of total scope of work.
- 13. Schedule of Requirements:** Vendor must supply, install and commission the lab furniture (fume hoods, island benches, instrument bench) within **8 weeks from the date of purchase order.**
14. **Final payments** will be released after satisfactory field testing reports and commissioning, nothing extra will be payable for testing and commissioning.
15. **Quality Assurance:**
 - a. Vendor should be member of Scientific Equipment and Furniture Association (SEFA).
 - b. Vendor should follow the SEFA guidelines in providing with quality products and services, recommended practices in the areas of fume hoods, laboratory work surfaces, furniture installations, casework and fixtures.
 - c. Vendor should supply furniture (steel frames, panels & shutters) made from Prime Quality Steel such as Tata Steel. Steel should be galvanized scratch and corrosion resistance, and finished with high quality corrosion resistant epoxy powder coating with 70-80 microns thickness.

ISLAND BENCH:

- Island bench with dimensions of 4000mm L x 1500mm W x 900mm H
- Bench top: High quality Jet black granite of 18-20 mm thickness without beading, edges fabricated and rounded for smooth finish and groove at the bottom to avoid chemical spillage.
- Island bench provided with continues under bench storage cabinet modules without any leg/knee space, having one drawer, one/ two shutters and one adjustable shelf with a weight carrying capacity of 40kg or above UDL. The overall load carrying capacity of cabinet to be 80 Kg of UDL – Uniformly Distributed Load. Below the sink, a two shutter door frame to be provided.
- All storage units standing on height adjustable legs, each having a load carrying capacity of 450 Kg.

- All under bench storage module should be provided with godrej or any other better quality locks.
- Shutter mounted to the storage module with a high quality corrosion resistant slow and smooth self-closing type spring loaded hinges which can open to 95 degrees.
- Drawer with high precision slides and roller bearings which can support loads upto 30 kg UDL.
- Door and shutter pulls/handles made of high quality stainless steel.
- Service fittings shall be made of brass and epoxy coated.
- Island benches with continuous horizontal 2 stage reagent rack shelves from one end to other without any break and load carrying capacity of 40 kg of UDL for the length of 1000 mm. Reagent rack shelves with a Jet black granite of 18-20 mm thickness with beading.
- Peg board: 750mm W and 900mm height acrylic peg board, with approx. 30 pegs and a stainless steel tray.
- Power sockets: Each island bench with 5/15A sockets and switches of 12 nos with 6 nos on either side of island bench. Switches with LED to indicate 'ON' position
- Sink dimensions: 550mm L x 350mm W x 250mm H
- Sink made up of single piece moulded polypropylene drop in sink with PP strainer and bottle trap.
- Portable inclined eyewash with double eye-spouts and flexible pipe mounted near sink, made of brass body with anticorrosive epoxy coating.
- Three way water faucets: Sink unit shall have 3 way (2 straight + 1 swan neck) 360° turn type water faucets made up of Brass with epoxy powder coating for corrosion resistance.

WALL/INSTRUMENT BENCH:

- Wall bench with dimensions of 3350mm L x 900mm W x 900mm H
- Bench top: High quality Jet black granite of 18-20 mm thickness without beading, edges fabricated and rounded for smooth finish and groove at the bottom to avoid chemical spillage.
- Wall bench provided with continues under bench storage cabinet modules without any leg/knee space, having one drawer, one/ two shutters and two adjustable shelves with a

weight carrying capacity of 40kg or above UDL. The overall load carrying capacity of cabinet to be 80 Kg of UDL – Uniformly Distributed Load.

- All storage units standing on height adjustable legs, each having a load carrying capacity of 450 Kg.
- All under bench storage module should be provided with godrej or any other better quality locks.
- Shutter mounted to the storage module with a high quality corrosion resistant slow and smooth self-closing type spring loaded hinges which can open to 95 degrees.
- Drawer with high precision slides and roller bearings which can support loads upto 30 kg UDL.
- Door/shutter pull made of high quality stainless steel.
- Service fittings shall be made of brass and epoxy coated.

FUME HOOD:

- Type of Hood: Advanced Aerodynamic construction, automatic Bypass type Bench Fume Hoods - 3 Nos
- Extraction systems: Cluster of three fume hoods with a single blower and ducting. Each fume hood should get constant dynamic air flow.
- Proposed lab is planned in the ground floor and hence the blower and ducting should go until first floor terrace.
- PP centrifugal, silent, high efficiency direct driven, corrosion resistant blower with capacity 2400 CFM, and a chemical resistant impeller, 3HP, 4 pole motor.
- Ducting of PP&FRP (3mm+2mm) construction, with flanges, bends, dampers, etc.
- Flow rate of fume hood should be finalized/ or adjusted, while installing the Fume hood according to our specification or need.

- **Dimensions:**

Over all dimension of each fume hood along with base cabinet: 1800mm L x 900mm W x 2400mm H

Upper Unit outside dimensions 1800mm L x 900mm W x 1500mm H

Approximate dimensions for inside work area of upper unit of fume hood 1600 mm L x 750 mm W x 1200-1300 mm H

Height of fume hood work top from ground 900 mm

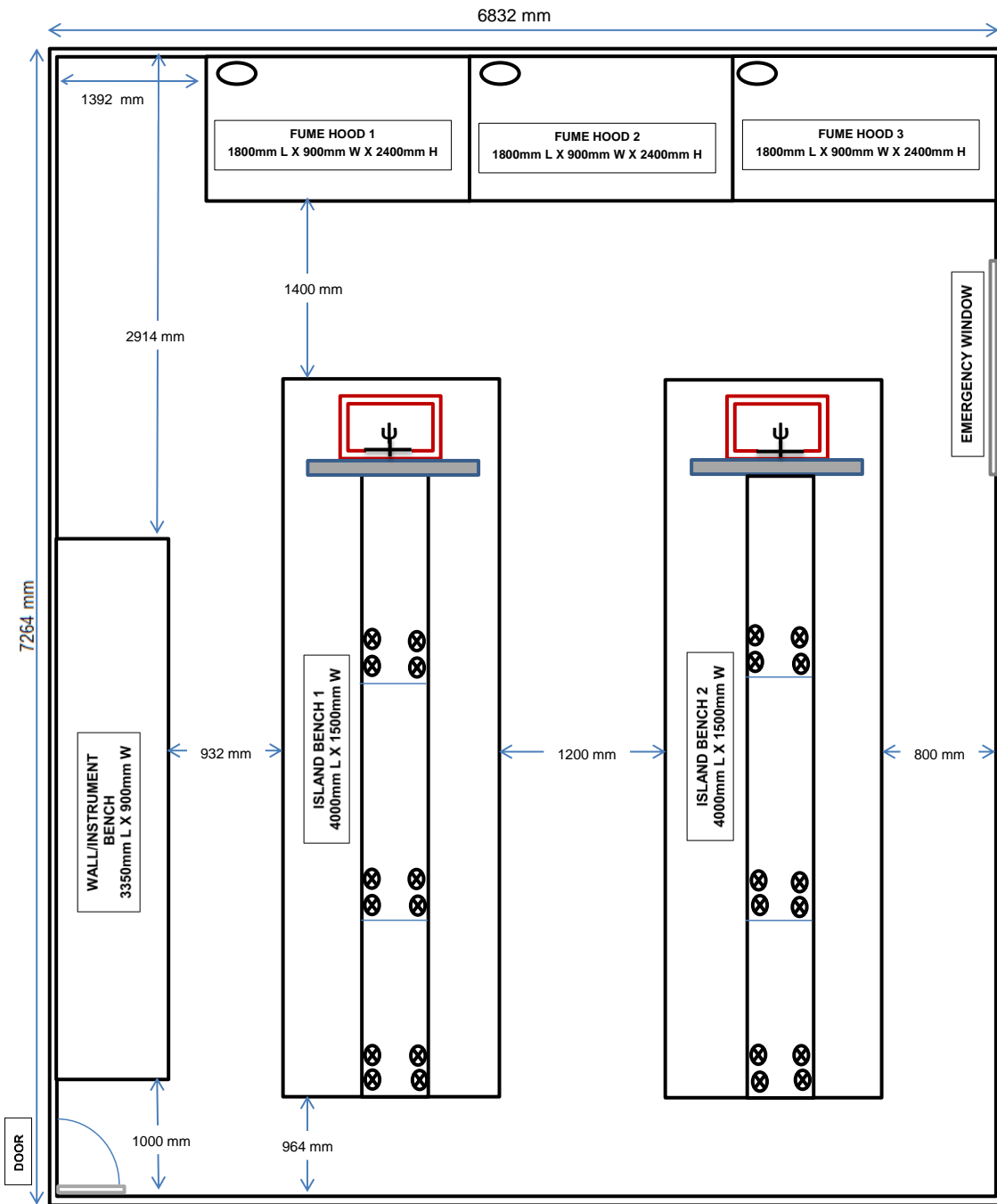
Base cabinet over all dimensions 1800mm L x 900mm W x 900mm H

- Epoxy powder coated externally in Ivory color, with Internal Off white lining with a phenolic resin
- Fume hood door with vertical and horizontal sashes (Four horizontal sashes in two channels), sash door of laminated safety float glass with thickness of 6 mm openable to height (sash viewing height for optimum visibility of the fume hood interior) 900 mm.
- Safety standards:
Fume Hoods must comply with **ASHRAE 110** (American Society of Heating, Refrigeration and Air Conditioning Engineers) testing and also **field ASHRAE testing is must.**
- Construction:
Rigid main structure frame of 2 mm Galvanised iron construction. To allow for maintenance and replacements, the interior liner panels shall be removable without disassembly of the frame structure and outer steel panels.
Interior chemical and heat resistant, fire retardant, 6 mm phenolic resin lining and with uniform and smooth white surface.
Flip on type horizontal airfoil mounted on worktop with 1.5-2.0 mm stainless steel construction with epoxy powder coating.
- Worktop: High quality Jet black granite of 32 mm thickness made in the form of a watertight pan with 10 mm depth and 20 mm width beading on all sides of work top to contain spillage, front side of the worktop with edges fabricated and rounded for smooth finish and with a groove at the bottom to avoid chemical spillage.
- Cup sink:
Overall Dimensions: 200mm L x 100mm W
Oval shaped black PP sink with splash and spillage proof at left rear end inside fume hood for drainage. Utility tap of one way made up of Brass with epoxy powder coating for corrosion resistance placed inside hood pointing cup sink.
Electrical requirements:
MCB (Miniature circuit breaking) type starter on left/right side of the fume hood with power indicator
Circuit control: MCB for each fume hood with one main circuit control
With 5/15A sockets and switches of 8 nos for each fume hood with 4 nos on either side of front fascia, switches with LED to indicate 'ON' position
- Utility services like Raw Water for tap above the cup sink, Compressed Air, Nitrogen and Vacuum, shall have remote control service valves of brass constitution, color coded (as per international standards) with plastic handles, with plumbing, and staggered service outlets.

- Lighting: Twin tube light of Type T8 fluorescent light fitting for each fume hood, covered with fire and heat resistant light shield, at the same time with maximum and good intensity light inside the hood area.
- Apparatus Grid with vertical and horizontal rods of 12mm diameter at the rear end inside the fume hood for suspending laboratory equipment. Grid made of good quality corrosion resistant stainless steel with epoxy coating. Position of grid from the back of hood is 130mm, and with distance between the vertical and horizontal rods approx. 200mm.
- Fume Hood Base Unit:
With rigid structure to support fume hood, two chemical storage base modules with a drawer and two shutters with double walled construction, having two adjustable shelves with a weight carrying capacity of 40kg or above UDL. Chemical storage Base cabinet specifically designed for the storage of corrosive chemicals, lined with a molded one piece polyethylene tub, connected with fume hood exhaust system through PVC vents, and shutter provided with louvers for ventilation and the cabinet doors lined with polyethylene sheet.
- All under bench storage module should be provided with godrej or any other better quality locks.
- Shutter mounted to the storage module with a high quality corrosion resistant slow and smooth self-closing type spring loaded hinges which can open to 95 degrees.
- Drawer with high precision slides and roller bearings which can support loads upto 30 kg UDL.
- Door/shutter pull made of high quality stainless steel.
- Service fittings shall be made of brass and epoxy coated

Note:

All the specifications mentioned above are not exhaustive and are only indicative; all the work should be executed by vendor as per instructions of purchaser.



**PROPOSED LAYOUT FOR WET LABORATORY
WORK STATION AND FUME HOOD**



= Peg board



= Electrical socket



= 3 way water faucet



= Sink



= Cup sink

All the measurements are approximate and not upto scale.