



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND
RESEARCH THIRUVANANTHAPURAM (IISERTVM)
(Govt. of India, Ministry of H.R.D)**

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THIRUVANANTHAPURAM 695016,
KERALA, INDIA.

Date: 13th August 2015

INVITATION TO TENDER(IND)

**No: IISER/PUR/6095/15
Due Date: 01st September 2015 [4PM]
Date of Opening: 02nd September 2015 [3PM]**

Dear Sirs,

SUB: Supply of Chemistry Lab Furniture.

We invite Sealed Tenders for the following items:

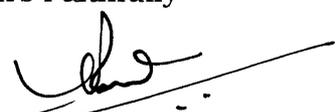
Sl No	Description
1	Chemistry Teaching Laboratory Furniture as per Specifications [Annexure I] and layout drawings [Annexure II]

Please quote your lowest rate and shortest delivery period as per the following terms. Your offer in sealed cover **SUPERSCRIBING TENDER NUMBER AND DUE DATE** shall reach us on or before the due date and time. Please follow "Instruction to Tenderers" attached.

- EMD** : **Rs. 48,000/-in the form of DD or B.G. to be submitted along with the quote. Quote received without EMD will be summarily rejected.**
- Payment** : Within 30 days after supply and installation/Net 30 days /LC.
No advance payment will be made by IISERTVM.
- Delivery** : To be delivered at our stores (Free delivery). If import, mention Ex-works/FCA/CIP terms with clear breakup charges.
- Taxes & Duties** : Indicate taxes and duties. We are exempted for customs duty under 51/96 notification and Excise duty under 10/97 notifications.
- Discount** : Indicate, if any.
- Delivery Schedule** : Required Immediately. Indicate your schedule
- Validity of quote** : 60 days

Thanking You,

Yours Faithfully


**K. BHASKARA RAO
Deputy Registrar
[Purchase & Stores]**

P.S. CATALOGUE/LEAFLET FEATURING ALL TECHNICAL SPECS/INFORMATION OF THE PRODUCT QUOTED SHALL ACCOMPANY THE OFFER.

Specifications for Chemistry Teaching Lab Furniture (IISER-TVM, Pratheeksha Building)

General Instructions:

1. Location of island and wall side benches should be strictly followed as per specifications attached and dimensions as given in the diagram.
2. All the Island and Side benches must have enough lockable, drawers and cabinets underneath (as specified below).
3. The supplier should dismantle the lab from the transit campus and re-install it in our permanent campus at Vithura when the labs are ready (with in 2-3 years). This undertaking has to be submitted along with the offer.
4. Based on our outline below, detailed drawings with detailed specifications should be submitted along with the offer. Otherwise the offer may not be considered.

1. Work Benches

a. Island benches

Worktop:

- Should be of well polished granite of 20mm thickness.
- All edges should be rounded for smooth finish.
- The color of the worktop should be black.
- The bench panel should be of large size with minimum joints.
- Gas line provision-4 Bunsen burners per table (two numbers either side of the table as per lab design)

Framework:

- The cantilever framework should be of mild steel box sections of 2 mm thickness, de-greased and powder coated.
- Adjustable leveling jacks of tough plastic/nylon should be provided for each leg for the support of the frame.

b. Wall side benches

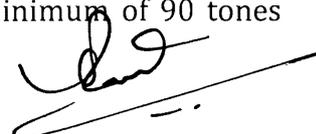
- Bench specifications are same as the Island benches. The table must be strong enough to take the load of heavy equipment.
- Polypropylene washbasins (as mentioned in the diagram) and necessary plumbing has to be provided.

2. Under-bench Cabinets

- Should be floor mounted and movable without castors. The height should be of 900mm from the floor.
- Drawers and door cabinets should be positioned one other the other.
- All Door cabinet must have adjustable shelf inside the cabinet.
- should have foot space of atleast 100mm from finished floor level.

Cabinet Body, Door and Drawers:

- Should be made of 18 mm BWP plywood laminated with 0.9 mm thick melamine on both sides.
- The lamination should be done with hot press with minimum of 90 tones pressure.



- All exposed edges should be lipped with PVC lipping not less than 0.5 mm to protect from impacts, moisture and insects. The lipping should be of machine applied with hot melt glue at a temperature of 205 degree Celsius or above.
- The melamine laminate should confirm to BS, NEMA & BIS Standards.
- The doors and drawers should have full length grab rail that is not projecting outside from the door front surface.
- The grab rails should be made of aluminum and powder coated.
- The cabinet body should be made of permanent casework without any screws and knockdown / mini-fix fittings.
- There should not be any gaps inside of the cabinet body or such places that lead to dust accumulation.
- All joints should be sealed and should be made with the same material as above.

Knee space Panel:

- Should be made of 9 mm BWP plywood laminated with 0.7mm thick melamine on both sides.
- The lamination should be done with hot press with minimum 90 tones of pressure.
- All exposed edges should be lipped with PVC lipping not less than 0.5 mm to protect from moisture and insects. The lipping should be machine applied with hot melt glue at a temperature of 205 degree Celsius or above.

Hinges:

Hinges for the doors should be rust free, nickel coated heavy duty, self closing, and allowing opening up to 165 degree and should be adjustable in all three directions for perfect finish and corrections.

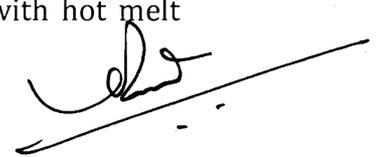
Reagent Racks:

- All Island Benches should have two tire reagent racks.
- Plat form of reagent rack should be of wired glass supported by the MS powder quoted frames. The racks should also be resistant to chemical spills.
- Plug points for electrical connections (dual 16+6 Amp power sockets) should be provided on the island and wall side workbenches as mentioned in the plan attached. The bidder should also provide necessary wiring to the power sockets.

3. Wall Cabinets

- Should be of panel door/ glass inflit.
- Should be made of BWP plywood laminated with 0.7 mm thick melamine on both sides.
- The lamination should be done with hot press with minimum of 90 tones pressure.
- All exposed edges should be lipped not less than 0.5 mm to protect from moisture and insects. The lipping should be machine applied with hot melt glue at a temp of 205 degree Celsius or above.

4.Fume Hoods:



4.1 Compliance of Regulations and Standards

i. IS 4209:2013; ii. ASHRAE Standard 110 1995; iii. SEFA 1; iv. ANSI Z9.5; v. NFPA 45;

4.2 Outer Construction/ super structure

The superstructure shall be double walled construction. The double wall shall house, conceal steel framing members, attaching brackets and remote service fixture valves. It shall be constructed using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The steel shall be galvanized and shall be of 18 gauge or thicker. The exterior of the structure shall be epoxy coated for chemical resistance, scratch resistance and to prevent rusting. The rear part of the fume hood shall have service access for maintenance.

4.3 Inner lining and worktop

Internal side wall panels shall be fabricated using 6 mm thick liner of TRESPA make. The work top shall be made of 20 mm thick material of TRESPA make.

4.4 Sash

The sash shall be constructed from transparent, scratch-resistant, shatter-resistant and flame resistant material. Combination of vertically and horizontally moving sashes shall be provided for VAV fume hoods. The movement of the sash shall be smoothly controlled by an appropriate technology. All the components shall be manufactured using non-rusting material.

4.5 Electrical

Lighting fixtures shall be of fluorescent type. Light fixtures shall be sealed, vapour tight and protected by a transparent, scratch-resistant, shatter-resistant and flame resistant material. All the electrical switches and sockets shall be positioned outside the fume hood just below the work top. Each fume hood shall necessarily possess minimum six electrical sockets (220-240V, 6-16A). Each fume hood shall have a shunt tripper for the safety control of all the electrical points. All the sockets shall be wired with 2.5 sq. mm copper conductor stranded FRLS insulated cable. The switches and sockets shall be of one of the following makes – Legrand (ARTEOR SQUARE) or MK (WRAP SQUARE).

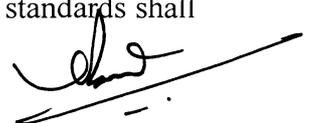
4.6 Service Valves, Plumbing and Drain

The facility for water inlet and outlet drain is already provided. There shall be provision for water supply in each fume hood with a high density polypropylene (approx. dimension 80×160 mm) cup sink directly below this point. The shut-off valve or cock for the water supply shall be provided outside the fume hood. All the fittings shall be of one of the following makes – BROEN, Water Saver or Brownall Labtap.

4.7 Gas Supply

Provision for supply of (a) pressurized air (b) inert gas(nitrogen or argon)

All the fume hoods in each of the labs shall be provided with (a) pressurized air and (b) inert gas(nitrogen or argon) facility. All the fittings shall be manufactured using SS304. There shall be a uniform distribution system for the gas supply and the maximum pressure of the outlet gas in each fume hood shall be 2 to 5 bars. A calibrated control valve shall be provided outside each hood. All the gas valves shall be colour coded and be of one of the following makes – BROEN, Water Saver or Brownall Labtap. The inlet of the gas supply shall be placed near to the corridor adjacent to each lab. If necessary, securing belts meeting international standards shall be provided for securing at least two gas cylinders.



Wherever necessary, an inert gas (nitrogen or argon) purification and control unit delivering UHP grade gases shall be provided.

4.8 Baffles

The baffles shall be fabricated using 6 mm thick liner of TRESPA. At least three slots shall be provided for effective distribution of flow of air. They shall be placed at a distance of approximately 5 cm from the back liner and shall be removable for cleaning.

4.9 Blowers, Ducting, Duct Collar, Air Flow and Face Velocity

The noise level in the fume hood shall not exceed 50 decibels. High quality blowers meeting international standards shall be provided. The blowers shall be manufactured using non-rusting material and be protected by an outer casing made of high density polypropylene. The motors shall have high insulation value and shall work on 380-415 volts, 50 Hz, 3 ϕ , 3W system with suitable rating MPCB and starters. The ducting and collar shall be done using fibre reinforced plastic (polypropylene). All the fume hoods shall have an approximate face velocity of 80 to 100 fpm.

4.9 Air Foil

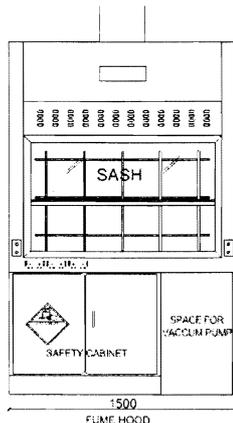
Air foil shall be manufactured using SS316 and shall be of aerodynamic design.

4.10 Dampers

Suitable dampers meeting international standards shall be provided wherever necessary.

4.11 Cabinets below fume hood

Cabinets shall be provided as specification in 2.1 and 2.2. Cabinet for keeping vacuum pump shall be provided as depicted in the figure. It shall be made using high quality, cold rolled, mild and degreased steel meeting requirements of ASTM A366. The steel shall be galvanized and shall be of 18 gauge or thicker. The door shall be completely epoxy coated for chemical resistance, scratch resistance and to prevent rusting. The door shall have perforations in order to dissipate heat generated by vacuum pumps. The cabinet shall have one electrical socket (220-240V, 6-16A). There shall an internal provision to bring the vacuum tubing from the pump to the inside of the fume hood.



4.12 Scaffold/Lattice

A 4x4 height and width adjustable scaffold made of SS316 (12 mm diameter) shall be provided. The scaffold shall be detachable.

5 Cabinets for Chemical Storage

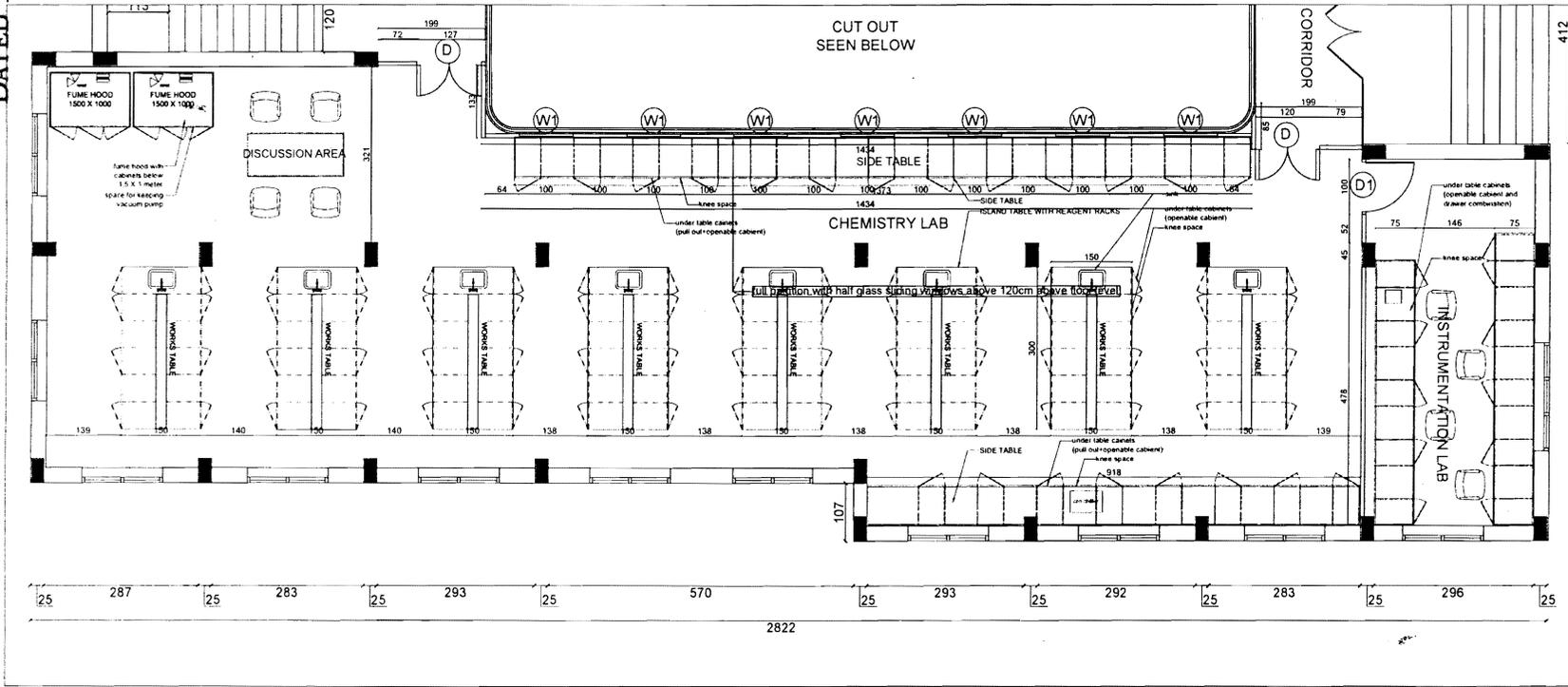
5.1. Under Fume Hood Cabinets for Storage of Flammable Chemicals

The cabinets shall have double door. The height of the cabinets shall exactly match with the space below the fume hoods. Wherever necessary, the vents shall be connected to the fume shaft/blower. At least one height adjustable shelf shall be provided.

5.2. Under Fume Hood Cabinets for Storage of Corrosive Chemicals

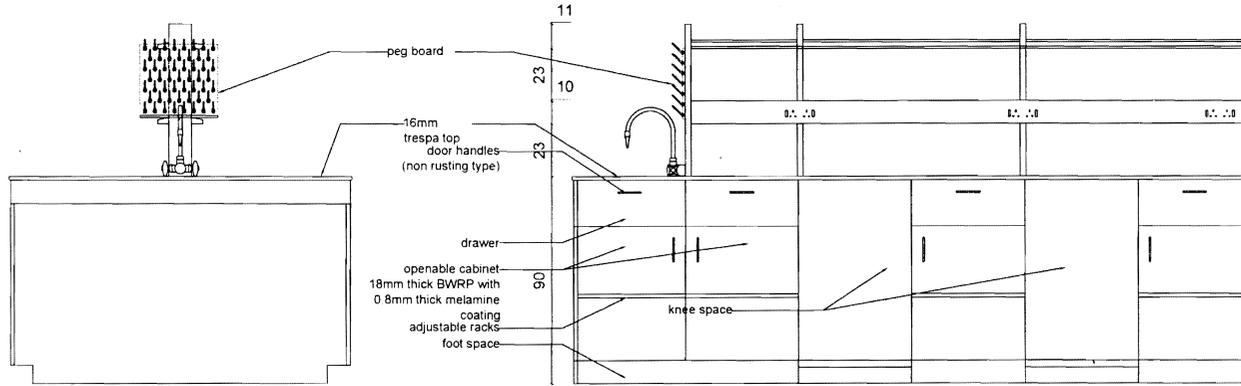
The cabinets shall have double door. The height of the cabinets shall exactly match with the space below the fume hoods. Wherever necessary, the vents shall be connected to the fume shaft/blower. At least one height adjustable shelf shall be provided.

A handwritten signature in black ink, consisting of a stylized, cursive name, is written over a horizontal line.



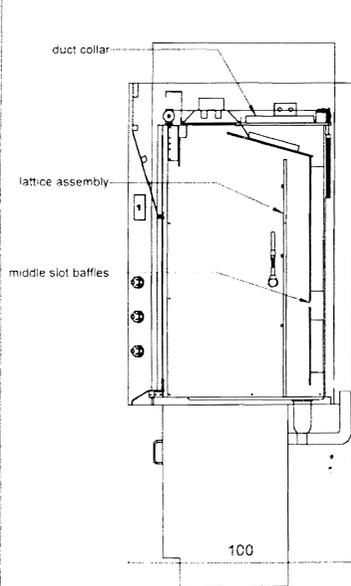
GROUND FLOOR

 <p>IISER INTEGRATED INSTITUTE FOR STUDY AND RESEARCH</p>	PROJECT : CHEMISTRY/GROUND FLOOR		
	TITLE : PRATHEEKSHA BUILDING		
	DRAWN : SHEBIN	CHECKED :	APPROVED :
	DWG No : IC/PB/PD/P01/00	SCALE :	DATE : 29.06.2015
	All dimensions in CM	REVISION : R01	SHEET No : 0 OF 0

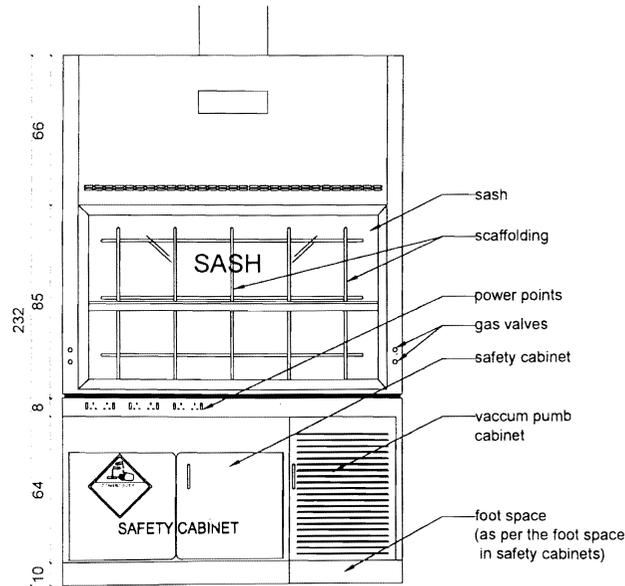


ISLAND TABLE SIDE ELEVATION

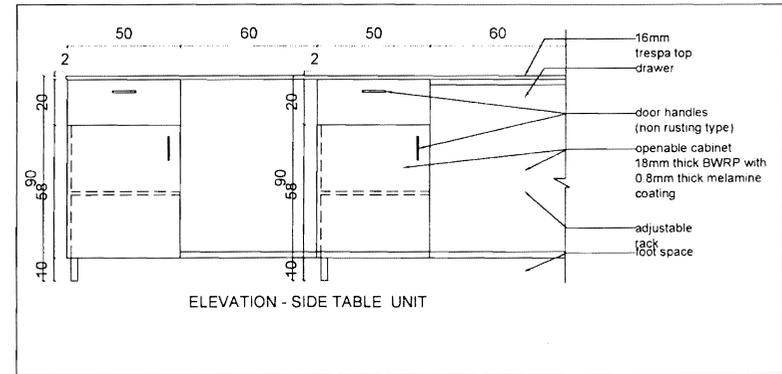
ISLAND TABLE FRONT ELEVATION



FUME HOOD- SECTION



FUME HOOD FRONT ELEVATION

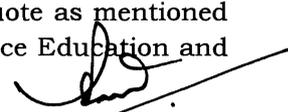


ELEVATION - SIDE TABLE UNIT

	PROJECT : PRATHEEKSHA BUILDING		
	TITLE : GF CHEMISTRY LAB FURNITURE		
	DRAWN : SHEBIN	CHECKED :	APPROVED :
	DWG No : IBER/ED/100	SCALE :	DATE : 21.07.2015
	All dimensions in CM	REVISION : 000	SHEET No : 0 OF 0

IISERTVM
INSTRUCTIONS TO TENDERERS [INDIGENOUS].

1. Tenders should be sent in sealed envelopes superscribing the relevant tender no. and the due date of opening. Only one tender should be sent in each envelope.
2. Late tender and Delayed Tenders will not be considered under any circumstances.
3. Sales Tax and /or other duties/levies where legally levies and intended to be claimed should be distinctly shown separately in the tender.
4. (a). Your quotation should be valid for a minimum period of 60 days from the date of opening of the Tender. Quotation with firm prices will be preferred.
(b). Prices are required to be quoted according to the units indicated in the Invitation to Tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
5. **(a) Preference will be given to those tenders offering supplies from ready stocks. The basis of delivery is at IISER site free of cost.**
(b) Our payment terms are within 30 days of receipt and acceptance of the item at our site.
6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the IISER shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to take back the samples at his own expense.
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.
(d) **Specifications:** Stores offered should strictly conform to our specifications. Deviations, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary along with the quotations. Test Certificates wherever necessary should be forwarded along with supplies. Whenever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate reasons for the same.
7. IISER shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
8. Corrections, if any, in the Quotation must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail. Quotation must have price for each line item and totaling of the price including taxes and duties should be clearly mentioned.
9. The tenderer should mention the name of his bankers, Sales Tax Registration, PAN number etc in the tender.
10. The authority of the person signing the tender, if called for, should be produced.
11. The purchaser reserve the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.
12. IISER being a Govt of India Educational and Research Institute, is exempted from payment of Excise Duty under Notification No. 10/97 and Customs Duty under Notification No. 51/96- Customs dated 23rd July 2009. Also, we can issue Form 16 as per VAT Rules.
13. The stores supplied should be covered with minimum of 1 year warranty from the date of supply, installation and commissioning.
14. Earnest Money Deposit/ Bid Security should be submitted alongwith your quote as mentioned in Invitation for Tender. EMD should be in favour of Indian Institute of Science Education and Research Thiruvananthapuram valid for 90 days


DEPUTY REGISTRAR
[PURCHASE & STORES]