

#### CENTRE FOR NANO AND SOFT MATTER SCIENCES

Arkavathi, Survey No.7, Shivanapura, DasanapuraHobli, Bengaluru – 562162

Autonomous Institution under the Dept. of Science & Technology, Govt. of India

#### **REQUEST FOR QUOTATION**

#### PI3/000052/21-22/TBI

Date :12.05.2022

The Centre invites Quotation for the following item.

Sl No	Description of Item	Qty	Unit/Price	Total Price
01.	Customized Low Constant Volume (LCV) type Bench Fume Hood(Size: L 1800 x D 915 x H 2300 mm) (For AC Lab)	01 No.		
02.	Customized Low Constant Volume (LCV) type Bench Fume Hood(Size: L 2100 x D 915 x H 2300 mm) (For AC Lab)	01 No.		
03.	Customized Chemical Storage Cabinet (CSC) Size: L 1000 x D 450 x H 1830mm	02 Nos.		
04.	Customized Exhaust Fan (400 mm Dia) - One fan for 2 Nos. Chemical Storage Cabinet & 1 No. 1800 mm wide Fume Hood	01 No.		
05.	Customized Exhaust Fan (315 mm Dia) - one fan for 1 Nos. 2100 mm wide Fume Hood	01 No.		
06.	Supply and Installation of exhaust ducting in PP/FRP (Round shape) construction (3mm+2mm) complete with necessary bends,reducers,T- connections,supports,flanges,gaskets,nut bolts etc.	50 Sq.Mtrs		
	Complete Technical specifications and Diagrams enclosed for reference			

#### NOTE:

- (a) The sealed quotation should be addressed to the Administration and Finance Officer, Centre for Nano and Soft Matter Sciences, Arkavathi, Survey No.7, Shivanapura, DasanapuraHobli, Bengaluru – 562162 within the due date of 19.05.2022
- (b) Discount if any should be clearly mentioned.
- (c) Delivery schedule, warranty details must be clearly indicated.
- (d) Taxes & duties should be separately shown.
- (e) The quoted price should be valid for a minimum period of **3 months** from the date of quotation.

- (f) **Terms of payment:**The payment in INR shall be made through NEFT/RTGS after delivery and successful installation of the item
- (g) Complete details such as the bank account number/IFSC/SWIFT/Bank Address, etc. should be provided along with the price bid.
- (h) **Warranty and replacement:**The Supplier shall ensure that the Items/Equipment supplied shall comply fully with the specifications laid down, for material workmanship and performance. The Warranty period should be specifically mentioned.
- (i) The Centre reserves the right to accept or reject any quotation or part thereof without assigning any reasons.
- (j) GST if applicable should be at concessional rates as applicable under provisions of OM No. 45/2017 relating to Scientific Research Institutes. Necessary Certificate will be issued at the time of placing order.

Yours sincerely

Administration and Finance Officer

Sr. No.	Description	Qty.	Unit	Unit Rate (INR)	Amount (INR)
1	Customized Low Constant Volume (LCV) type Bench Fume Hood (Size: L 1800 x D 915 x H 2300 mm) (For AC Lab)	1.00	Nos.		
	Consisting of following : (As specified in Annexure - III)				
	Fume Hood Superstructure				
	Fume Hood Worktop				
	Service Valves				
	Electrical Fittings				
	Controls				
	Fume Hood Understructure Fume Hood Under-Cabinet <b>(Chemical Storage</b> <b>Purpose)</b>				
	Accessories				
2	Customized Low Constant Volume (LCV) type Bench Fume Hood (Size: L 2100 x D 915 x H 2300 mm) (For AC Lab)	1.00	Nos.		
	Consisting of following : (As specified in Annexure - III)				
	Fume Hood Superstructure				
	Fume Hood Worktop				
	Service Valves				
	Electrical Fittings				
	Controls				
	Fume Hood Understructure				
	Fume Hood Under-Cabinet <b>(Chemical Storage</b> <b>Purpose)</b> Accessories				
3	Chemical Storage Cabinet (CSC) Size: L 1000 x D 450 x H 1830mm	2.00	Nos.		
	<ul> <li>Outer body in GI epoxy powder coated construction</li> <li>Inner Skin / Baffles in 5mm Thk. PP construction sheet on shelves.</li> <li>Special arrangement for ventilation from each shelf,</li> </ul>				

	<ul> <li>Double skin metallic doors with Lock, Butt Hinges, Positive Catche and SS handles</li> <li>100mm dia. Duct damper in PP construction</li> </ul>			
4	Customized Exhaust Fan (400 mm Dia) – One fan for 2 Nos. Chemical Storage Cabinet & 1 No. 1800 mm wide Fume Hood	1.00	No.	
	<ul> <li>'- Single piece molded UV treated chemical resistant SISW direct driven centrifugal fan in PP constuction with suitable stand in</li> <li>MS powder coated construction, CFM 1200 - 1300</li> <li>- Corrosive resistant PP Impeller with extra strength, highefficency, properties which produces lower noise and power consumption.</li> <li>- Drive - 2 HP, 1400 RPM, 415V, 50Hz., TEFC Class B insulation</li> <li>- 16A, 3Ph MCB for Fan - Legrand or eq. Make</li> <li>- Electrical Panel with necessary internals and VFD for fan.</li> </ul>			
5	Customized Exhaust Fan (315 mm Dia) - one fan for 1 Nos. 2100 mm wide Fume Hood	1.00	No.	
	- Single piece molded UV treated chemical resistant SISW direct			
	driven centrifugal fan in PP construction with suitable stand in			
	MS powder coated construction, CFM 800 to 1000			
	- Corrosive resistant PP Impeller with extra strength, high efficiency, properties which produces lower noise and power consumption.			
	- Drive - 1.5 HP, 2400 RPM, 415V, 50Hz., TEFC Class B insulation induction motor with IP55 enclosure, in Non- FLP const.			
	- 16A, 3Ph MCB for Fan - Legrand or eq. Make			
	- DOL Starter for Motor.			

<ul> <li>Supply and Installation of exhaust ducting in PP/FRP (Round shape) construction</li> <li>(3mm+2mm) complete with necessary bends, reducers, T-connections, supports, flanges, gaskets, nut bolts etc.</li> </ul>	50	m			
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# **Commercial Offer for PP / FRP Ducting (Round Shape)**

Sr. No.	Description	Unit Rate per Sq.Mtr. (INR)				
	Supply & Installation of exhaust ducting in PP/ FRP(Round					
A	<b>Shape)</b> construction (3mm + 2mm) complete with necessary bends,					
	reducers, T-connections, supports, flanges, gaskets, nutbolts etc.					
GST	GST shall be payable extra on Sr. No. A @ 18%					
Note	e: - Amount for ducting work shall be payable as per actual measur	rement.				

#### MANDATORY CERTIFICATION NEEDS TO BE SUBMITTED ALONG WITH QUOTATION

- 1. Certificate of SEFA compliance with SEFA membership certificate
- 2. Copy of SEFA 8M-2016 third party test certificates for laboratory furniture
- 3. Copy of ASHRAE membership certificate with testing certificate
- 4. Copy of ASHRAE 110-2016 third party test certificate for laboratory fume hoods
- 5. Copy of EN 14175 third party test certificate for laboratory fume hoods
- 6. Copy of BIFMA membership certificate
- 7. Copy of BIFMA HCF-8.1 Certificate
- 8. Copy of ISO 9001:2015 certificate
- 9. Copy of ISO 14001:2015 certificate
- 10.Copy of ISO 45001:2018 certificate

## PREISNTALLATION REQUIREMENT ON SITE TO BE ARRANGED BY CUSTOMER :

1. Provision of safe storage area for fume hood and lab furniture.

2. Unloading of material nearby the lab site with customer's own resources.

3. Clear passage to bring Fume Hood fully assembled in the Lab:(Ideal 1000 mm/40 inch min.)

4. Clear false ceiling height: (for fume hood Ideal 2800 mm/110 inch min.)

5. Clear ceiling height: (for ducting Ideal 3000

mm/118 inch min.)

6. Provision for civil related work ( i.e. Wall cut out, Core cut,

Foundation/MS Platform for blower Etc. )

7. Provision of scaffoldings/Holes for ducting

Required.

8. Approval of drawings for Duct layout required.

9. If bench top fume hood (without base cabinet) is required then provision of sufficient platform depth

(Ideal 1000 mm/39 inch min) and height (700 mm/27.5 inch).

10. Provision for for exhaust fan - 415 V, 50 Hz, 3 phase, AC with

necessary contactors & circuit breakers to be

provided to exhaust fan motor

11. Provide Electrical Cable - suitable for 415 V, 50 Hz, 3

Phase between Fume hoods to Blower.

12. Provision for Electrical points - 230 V, 50 Hz, single phase AC with necessary ELCB, near the junction box at top of the hood

13. Flooring and painting of the lab must be

complete before starting of installation work.

14. Provision for utility lines and drainage line up

to the fume hood's inlet.

15. Room Exhaust - There should not be any other exhaust system which may create negative pressure in the room.

16. For smooth operation of the Eye wash, minimum discharge of water should be 32ltr/min. at 2.5 to 3.0 kg/cm2 pressure.

17. Spot Extractors support bracket standard height is 1200 mm. (Additional charges will be applicable above this height)

### Annexure - II (6 Foot)

### **Technical Specification of Fume Hood**

Type of Hood:Low Constant Volume type Bench Fume HoodOverall Dimension:Width 1800 x Depth 915 x Height 2300mmInner Dimension:Width 1600 x Depth 645 x Height 1200mm

Sr. No.	Description	Qty (Nos.)
1	Fume Hood Superstructure consisting of	1
	- Structure frame in 2.0mm thick GI construction	
	- Inner lining, rear baffles and top baffles in 6mm thk. Phenolic resin construction	
	- Outer panels in 1.2mm thick GI construction.	
	- Aerodynamic Shape front posts, in GI construction	
	- Flip-on type Airfoil in 1.6 mm thick SS construction	
	- Streamlined shaped exhaust duct collar in PP const.	
	- Combination type, frameless design sash in toughened glass const. with full length sash handle in anodized Al const.	
	- Sash movement mechanism with counter weight.	
	- Twin LED tube type light with fittings	
2	Fume Hood Worktop	1
	In telephone black natural granite construction, having raised rails on all four sides,	
	with 1 No. oval shaped cup sink, in PP const., on left rear side.	
3	Service Valves	
	Having body in forged brass const., extended spindle in Aluminum construction, color coded knobs in	
	plastic const. angular shaped serrated nozzles, in epoxy coated forged brass const. 1.5mt. long flexible	
	tubing with end fittings for following services:	
	Services Tube Construction	
	Compressed Air - PU-4	1
	Vacuum - SS braided Teflon Hose	1
	Nitrogen - PU-4	1
	Potable Water - Nylon braided PVC Hose	1
4	<b>Electrical Services</b> with internal wiring (all in non-FLP const.)	

	- Controller for Blower & light (Touch Pad)	1
	- 16A, 2 Pole MCB - Legrand or eq. Make	1
	- 5/15A 3-pin Socket with switch/ MCB - Legrand or eq. Make	4
5	Controls	1
	Air velocity Monitor with low air alarm, Model AFA/1000 TEL - UK Make	
6	Fume Hood Understructure	1
	Fabricated out of heavy gauge rectangular shape hollow pipes in MS construction, duly finished	
	with corrosion resistant specialty coatings.	
7	Fume Hood Under-Cabinet (General Storage Purpose)	1
	Detachable design general purpose twin cabinets fabricated out of GI sheet, consisting of,	
	- Special arrangement for air ventilation inside the cabinet	
	- Twin doors in double wall const.	
	- Flushed type recessed handle.	
	- Heavy duty knucle-barrler special design door hinges.	
	- 1 No. removable shelf.	
	- Recessed base frame in heavy duty GI const.	
	- FRP Lining inside the chemical storage cabinet	
	- PP Tray for chemical storage	
	- Twin castors for easy removal of the cabinet.	
8	Accessories	
а	<b>200 mm dia. Duct damper</b> in PP const. complete with pre drilled flanges on both sides, manual operation	1
	handle and extended spindle, suitable for motorized drive.	
b	<b>Scaffold Grill (1630 x 750mm)</b> in Vertical rod design, fabricated out of 12.0mm dia.,	1
	Epoxy rods, having 150mm pitch between two rods.	
С	Ceiling Enclosure Panels in GI const; duly powder coated	1 Set

## Annexure - II (7 Foot)

# **Technical Specification of Fume Hood**

**Type of Hood:**Const. Bypass type Bench Fume Hood

**Overall Dimension: Inner Dimension:**  Width 2100 x Depth 915 x Height 2300mm

ion: Width 1900 x Depth 645 x Height 1200mm

Sr. No.	Description	Qty (Nos.)
1	Fume Hood Superstructure consisting of	1
	- Structure frame in 2.0mm thick GI construction	
	- Inner lining, rear baffles and top baffles in 6mm thk. Phenolic resin construction	
	- Outer panels in 1.2mm thick GI construction.	
	- Aerodynamic Shape front posts, in GI construction	
	- Flip-on type Airfoil in 1.6 mm thick SS construction	
	- Streamlined shaped exhaust duct collar in PP const.	
	- Combination type, frameless design sash in toughened glass const. with full length sash handle in	
	anodized Al const.	
	- Sash movement mechanism with counter weight.	
	- Twin LED tube type light with fittings	
2	Fume Hood Worktop	1
	In telephone black natural granite construction, having raised rails on all four sides,	
	with 1 No. oval shaped cup sink, in PP const., on left rear side.	
3	Service Valves	
	Having body in forged brass const., extended spindle in Aluminum construction, color coded knobs in	
	plastic const. angular shaped serrated nozzles, in epoxy coated forged brass const. 1.5mt. long flexible	
	tubing with end fittings for following services:	
	Services Tube Construction	
	Compressed Air - PU-4	1
	Vacuum - SS braided Teflon Hose	1
	Nitrogen - PU-4	1
	Potable Water - Nylon braided PVC Hose	1

4	<b>Electrical Services</b> with internal wiring (all in non-FLP const.)	
	- Controller for Blower & light (Touch Pad)	1
	- 16A, 2 Pole MCB - Legrand or eq. Make	1
	- 5/15A 3-pin Socket with switch/ MCB - Legrand or eq. Make	4
5	Controls	1
	Air velocity Monitor with low air alarm, Model AFA/1000 TEL - UK Make	
6	Fume Hood Understructure	1
	Fabricated out of heavy gauge rectangular shape hollow pipes in MS construction, duly finished	
	with corrosion resistant specialty coatings.	
7	Fume Hood Under-Cabinet (General Storage Purpose)	1
	Detachable design general purpose twin cabinets fabricated out of GI sheet, consisting of,	
	- Special arrangement for air ventilation inside the cabinet	
	- Twin doors in double wall const.	
	- Flushed type recessed handle.	
	- Heavy duty knucle-barrler special design door hinges.	
	- 1 No. removable shelf.	
	- Recessed base frame in heavy duty GI const.	
	- FRP Lining inside the chemical storage cabinet	1
	- PP Tray for chemical storage	1
	- Twin castors for easy removal of the cabinet.	
8	Accessories	
а	<b>200 mm dia. Duct damper</b> in PP const. complete with pre drilled flanges on both sides, manual operation	1
	handle and extended spindle, suitable for motorized drive.	
b	<b>Scaffold Grill (1930 x 750mm)</b> in Vertical rod design, fabricated out of 12.0mm dia.,	1
	Epoxy rods, having 150mm pitch between two rods.	
С	Ceiling Enclosure Panels in GI const; duly powder coated	1 Set