



CAMPUS PLANNING, DEVELOPMENT & MAINTENANCE OFFICE  
UNIVERSITY OF THE PHILIPPINES MANILA  
*The Health Sciences Center*  
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PROJECT TITLE : **SUPPLY & INSTALLATION OF LABORATORY FURNITURES  
@ INDUSTRIAL PHARMACY, BIOPHARMACEUTICAL LAB &  
MICROBIOLOGY LAB**  
College of Pharmacy  
University of the Philippines - Manila

SUBJECT : **SCOPE OF WORKS AND SPECIFICATIONS**



CPDMO10002634

### **Division 1 - General**

#### **01000 General Requirements**

1. The Supplier shall furnish all materials, equipment, tools, apparatus, appliances, accessories, transportation, labor and supervision required for the complete construction/assembly of the subject project, as shown on the drawings and called for in these specifications, ready for use.
2. All Suppliers submitting proposal for this project shall first examine the site. All proposals shall take into consideration all such conditions that may affect the work under this contract. The specifications and plans shall form part as one. Anything mentioned on plans and not mentioned on the scope of work and specifications and vice versa shall be properly consulted to the CPDMO Project Architect/Engineer for clarification. Any work or materials not in accordance with the drawings or specifications shall be replaced with new at the Contractor's / Supplier's expense.
3. The Supplier shall coordinate his work with all parties to ensure proper phasing or schedule of works. The Contractor/ Supplier shall engage under him, a registered Engineer or Interior Designer/ Architect to supervise his work. He shall remain at all times in the project site.
4. A logbook shall be available at the site. It shall contain the daily activities in the site, including weather condition, delivery, manpower and other matter pertaining to the condition of the project. It will also serve as data for Supplier and the Project Inspector.
5. Identification Card of installer/workers and engineer/representative shall be supplied by CPDMO with corresponding fees; it should be worn at all times while inside the building/campus premises. Those without IDs shall not be allowed to enter the premises for security purposes.

6. No alteration or additional work that will result in an additive or deductive cost change from the Contract shall be allowed without the approval of the chancellor.
7. Complete specifications with product sample shall be submitted by the contractor/supplier to CPDMO and end-user for evaluation. Inspection of the Project Architect/Engineer in-charge shall be required prior to installation of any item/material on the construction.
8. Existing condition of the work site shall be documented by the contractor and photos shall be taken before commencement of work to ensure such status. Any damage on the areas due to the contractor's on-going work shall be refurbished at his expense.
9. The Supplier shall provide a complete copy of "As built plans" of the project/unit concerned which shall include all the civil, architectural, plumbing, electrical and other related layouts in 20" x 30" original sheets. It should be properly drawn indicating all the specifications, layouts, tables and necessary data. An initial layout should be submitted in a B4 sheet for checking and approval of Project Architect/Engineer. Final "As built plans" shall be submitted with soft and hard copies.
10. Regular coordination meeting shall be conducted with CPDMO, Supplier and End-user for proper project monitoring.
11. After completion of all works, the Supplier shall promptly remove from the premises all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the construction works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.
12. All materials removed from the unit shall be properly documented prior to turn-over to the End-user for proper safe keeping.

## **Division 2 – Site Construction**

### **02200 Site Preparation**

#### *Mobilization / Demobilization*

- This work includes mobilization process, provision for warning signs, including barricades, temporary facilities, temporary fences, warning lights and similar safeguards shall be provided by the Supplier as they are required for protection of his manpower and others during the construction life of this project.
- Demobilization procedure shall include clearing of the affected areas from all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.



## **02290 Site Monitoring**

- Site monitoring shall be a must to the supplier for the effective implementation of the project. Any discrepancies on plans and actual site conditions shall be properly coordinated with the Project Architect/Engineer concerned for verification.
- Regular coordination meeting shall be done between the supplier or its representative and the Project Architect/Engineer concerned at CPDMO.

## **02500 Utility Services**

### *Utility Service/Consumption*

- Provision of electric and water meter shall be included in the quotation to be charged to the contractor's overhead. All utility consumption shall be provided with meters to limit the usage of such during working period. Payments of bills shall be made thru the Cashiers Office after the renovation period presenting the statement of account issued by Accounting upon recommendation of the Chief of CPDMO.

## **Division 12 – Furnishings**

### **12300 Manufactured Casework**

#### *General*

All casework shall be of modern design and constructed in accordance with the best practices of the wood laboratory furniture industry. Construction and design will result in "built-in" installations of cabinetry that have the appearance of flush overlay construction without protuberances.

#### *Standard Material Specifications*

##### **a. Laboratory Countertop:**

1. TRESPA TOPLAB PHENOLIC RESIN TOP 16mm thick finish, acid, heat, stain, scratch, anti-static, anti-microbial and chemical resistant Solid Phenolic Resin top.

#### **Phenolic Resin Certifications / Requirements:**

- ISO 14001 and GREENGUARD certified.
- ISML certification for hygiene and anti-microbial performance for 24 hours at 35°C under a RH of >95% and ISEGA certificate for conformity.
- Met the highest standards for UL classified/labeled for ASTM – 84, fire rated, anti-static materials DIN SI 953 & DIN 482, BEES listed, and SEFA 8/1998 chemical resistance testing.
- Complies with the European and International Testing Standards ENV 13419-1, ENV 13419-3, ISO 16000-3, ISO/DIS 16000-6 in its latest versions.
- Countertop should at least have 8-10 colors to choose from.
- Letter of authorization from the countertop manufacture.

- Certificate of Product authenticity of laboratory grade counter top from the countertop manufacturer.
- Phenolic Resin Technical Data on chemical resistance to acids, bases, salts, halogens, organic chemicals, solvents and biological stains under 24 hours test with corresponding test result based on SEFA (Scientific Equipment & Furniture Association) as well as the main reagents from the PSI (Professional Service Industries/Pittsburg Laboratory Division).  
SEE ATTACHED "Annex A" required test concentration on acids.
- Counter top test on material properties with corresponding test method on test result under EN 438-2:10, EN 438-2:21, EN 438-2:25, EN 438-2:16, EN 12721, EN 438-2:12, EN 438-2:17, EN 438-2:27, EN 438-2:14, EN 438-2:30, EN 438-2:24, EN ISO 178, ASTM D638-08, EN ISO 547-2, EN ISO 1183.
- Suppliers / Contractors should have atleast 20 years experienced specializing in laboratory furnitures.
- Suppliers / Contractors should have related finished/completed finished project.
- Suppliers should have their own factory. Suppliers / Contractors should have their own machineries such as; Post-forming machine, Edge-bonding machine, Milling machine, Roller press machine for better high quality control of the product. Site visit of factory shall be conducted.

b. Carcass / Base cabinet:

1. High-Pressure Laminated (HPL) with 1.0mm PVC edging on exposed sides.
2. High Pressure Laminate Requirements/Specifications:
  - ISO 14001 and GREENGUARD certified.
  - All HPL are manufactured in accordance with ISO 9001, and OHSAS 18001 criteria and meet or exceed three performance requirements of ANSI / NEMA standards, LD3-1991 and BS EN 438:1991 and ISO 4586-2 for high pressure decorative laminates.
  - Post-formable laminate thickness should be 0.7 – 0.8mm thick, while non post-formable laminate should be 0.6 – 0.8mm thick.
3. Modular cabinet shelving:
  - Vertical partitions; 18mm thick marine plywood, high pressure laminate on both sides, with 1.0mm PVC.
  - Horizontal partitions/fixed shelving; 18mm thick marine plywood, high pressure laminate on exposed sides, with 1.0mm PVC edging on exposed sides.
  - Adjustable shelves; 18mm thick marine plywood, high pressure laminated on both sides with 1.0mm PVC edging on exposed sides.
  - Backing board: 6mm thick highly pressurized laminated marine plywood on exposed side.
  - Baseboard:



- Baseboard: 18mm thick marine plywood with high-pressure laminate (HPL) on exposed side with aluminum bracket.
  - Interior framing; powder coated finish metal base frame and legs
- c. Swing Doors; post-formed, 18mm thick marine plywood, high pressure laminated (HPL) swing doors using post-formable laminate with 1mm PVC edging.
- d. Drawers face; post-formed, 18mm thick marine plywood, high pressure laminated (HPL) drawer face using port-formable laminate with 1mm edging.
- e. Apron; 6mm thick highly pressurized laminated marine plywood on exposed side.
- f. Open shelves; 18mm thick marine plywood, high pressure laminated (HPL) with PVC edging.
- g. Sink Bowl:
  1. Sink made of laboratory grade polypropylene, supplied with strainer, plug with PP chain. Sink supplied with laboratory grade polypropylene bottle trap and accessories.
  2. Supplier must submit Technical Data on Chemical resistance Test based on chemical listed in CP312: PART 1:1073 at minimum of 370 lists of chemicals.
- h. Pegboard:
  1. Transparent acrylic board complete with laboratory grade polypropylene peg sticks.
- i. Hardware and Accessories:
  1. Hinges: With push-fit mounting, automatic self-closing spring, nickel plated, and 92° degree swing angle.
  2. Drawer guide / Metal box: Extension drawer guide shall be epoxy coated for optimal protection against corrosive agents, single extension, 85mm height, and 20 kgs. Load capacity wuth self - closing mechanism.
  3. Hand grab type handle.
  4. Plinth Footing: Heavy-duty plastic adjustable leveler connected to baseboard for easy access.
  5. Screws: Connecting screw, confirmat screw, and various screws.
- j. Laboratory utility fixtures:

1. Laboratory Water Faucet - Should be made from highest quality materials, powder coated finish, high resistance to chemicals, UV fading and heat.

Water fittings should be supplied with rubber headwork, should come complete with a ceramic headwork to provide fine regulation, long life service and minimum maintenance. The Laboratory fittings must comply with PUB requirements and have excellent water efficiency of 3.6l/min or 3-ticks, the required conjunction with the "green environment". Should provide excellent performance and durability, with ease of installation and maintenance. The manufacturer should be certified to ISO 9001/EN 29001/BS 5750 Part.

- Flexible connections/hoses for water (Uniflex flexible hose system) must be supplied in 700mm length for final connection to the respective water. Hose material in contact with water should be appropriate for drinking water and should be secured by external stainless steel braiding to ensure long time service and resistance to wear.

k. Electrical fixtures, pipes and fittings:

1. Two gang, 220V, National/Omni brand.
2. PVC electrical conduits.

*Construction Method*

1. All casework shall be rigid box construction and self-supporting.
2. Cabinet exposed side shall be of high-pressured laminated.
3. Shelves shall be of two-sided, highly pressurized laminated marine plywood, with adjustable shelf support.
4. Cabinet doors and face drawers shall be 'post-formed' edges, high-pressure laminated plywood swing outdoor/face drawer with imported self-closing concealed hinges and hand grab type handles.
5. Base cabinets shall be of high-pressured laminated marine plywood with all exposed edges protected by a molded/seamless PVC edge.
6. Cabinet backing is made of 6mm single faced, high-pressured laminated marine plywood.
7. With adjustable footing/plinth of leveler.

**NOTE :**

The foregoing list of item of works does not in anyway limit the responsibility of the Supplier to perform all other works necessary for the completion of the project, Proposed Supply and Installation of Laboratory Furniture, College of Pharmacy.

**GUARANTEE**

The Supplier shall guarantee all works under this contract to be free from any technical, material, workmanship and/or factory defects and shall replace and repair to the satisfaction of the Project Architect / Engineer and/or to the Chief of



CPDMO on any part or portion of the work which may fail within **a period of one (1) year after the final acceptance of the system.**

#### COMPLETION PERIOD

The Supplier is given sixty **(60) calendar days** to execute the renovation works including the installation all system requirements. The Contractor shall coordinate to the CPDMO Inspector and End-users for the schedule of testing of systems and other related job.

Prepared by:

  
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