

### **Muffle furnace Specifications:**

Double walled chamber, Inner made of 4 Nos., siliminite refractory slabs and outer made of cold rolled mild steel sheets finished in powder coating. Insulation by ceramic fibre blankets to minimize the radiation heat loss. Double walled insulated door mounted on heavy duty hinges is provided with effective locking arrangements. Heating elements will be kanthal A1 coil placed at the outside of the muffle. Temperature is maintained and controlled by a digital temperature controller working in conjunction with thermocouple placed in the hot zone. Supplied complete with control panel.

- Outside Body made of M.S. Sheet powder coated
- Inner muffle made of Ceramic with high grade ceramic insulation
- Door insulation made of HFK Insulated Bricks
- Heating element are made from Kanthal A1 Wire
- Uniform distribution through all 4 sides with metal wire
- Maximum Working temperature up to 1160° C - 1200° C
- Equipped with Digital Temperature Controller cum Indicator fitted on top of the unit with indicating lamps & switches
- A special type of thermocouple fuse provided for safety to avoid over heating
- Power supply 230 Volts, 50 Hz
- Digital Timer
- Solid state fuses for extra safety
- PID Controller with printer interface
- Power rating around 10kW
- Silica Crucible 50ml Capacity with lid (6-set)
- Heat protection gloves (2set)
- IR Thermometer (1 unit)
- Thermocouple set up

### **Hot Air Oven: Specification**

Double Walled Chamber, Inner made of Stainless Steel and Outer made of cold rolled mild steel sheets duly finished in powder coating. Inter space in between the walls is tightly packed with special grade glass wool. Inner chamber accommodates trays at adjustable heights. Insulated double walled door in the front is provided with locking arrangements. Heating is by Nichrome wire heaters

evenly distributed on the three sides. Temperature is indicated and controlled by Digital Temperature controller. Fan is provided in the instrument to give uniform heating inside the chamber. Built in control panel accommodating all electrical/electronic accessories are provided at the side of the chamber. Temperature Range: 5°C above ambient to 250°C with an accuracy of  $\pm 1^\circ\text{C}$  with the details given below.

- Dimension: 24 x 24 x 24"
- 3000 watts
- 3-trays

### **Double distillation unit specifications:**

- All Quartz Double Distillation Unit manufactured from original fused quartz tubes.
- Electrical requirements - 230 Volts 10 / 50 Hz ,Single phase
- Distillation water capacity (ltr/hr)- 4 ltr/hr
- pH value- 6.9-7.0
- Conductivity ( $\mu\text{S}/\text{cm}$ ) <1.0
- Numbers of Built in Quartz heaters (nos)- 2
- Distillation units Type- horizontal
- Distillate Temperature ( $^\circ\text{C}$ )- 67
- Biological Activity - Pyrogen free
- Built in Quartz heater capacity (KW) - 3.5
- Double stage glass (quartz) distillation units - yes
- Cooling Water consumption (ltr/hr) - 140 ltr/hr
- With carboy for water storage: 20 ltr capacity ( 1 unit) , 10 ltr capacity (1 unit)

### **Centrifuge Specifications:**

Speed: 12000 to 18000 rpm

Rotor heads: 50 ml capacity vial – 6 or above, 15 ml capacity and 40 ml capacity

With following specification:

Digital timer, Brushless Induction motor with frequency drive, Microprocessor controller with digital display, smooth & soft start Inverter fault detection with auto shutdown, 7 segment LED display of speed Digital countdown timer & continuous run, Dynamic brake for quick deceleration,

Last set parameters recall (Useful for repetitive analysis), Automatic door opening, Stainless Steel centrifuge Chamber, easy to clean, Safety lid interlock to prevent lid opening during centrifugation, Imbalance detection & centrifugation stop with display of error, Motor overload protection and Gas hinge to prevent door falling. 2 set of spare rotor heads must be included with the standard package along with 15 ml volume capacity, 40 ml volume capacity and Oak ridge tube sets of 24 pieces.

### **Chemical work station Specifications:**

With electrical points and water inlets, wash basin, taps, lights, pipette and chemical racks with black granite /corrosion resistant working top.

### **Drug Characterization Work:**

Drug profile has to be created based on coherent beam photon scattering of homoeopathic drugs diluted in volatile liquid solvent (12 samples).

Drug characteristics has to be documented using the scattering profiles generated from coherent beam photon scattering.

Photonic features of the ultra diluted drugs has to be derived from the experimental data.

Machine generated digital data sets has to be processed and computational analysis and interpretation of these data sets must be carried out.

The final output and report must be in PDF or Word format.

Detailed description of the experiment carried out must be summarized and included in the final report with technical details.

The original machine data has to be handed over to the ARL after the completion of the work.

### **High Pressure Acid Digestion Bomb Specifications:**

Spec: 1800/1900 psi, 250 C operating temperature - safety ruptur disk

With Disk – Spring – Disk safety unit head, 100 ml reaction volume

PTFE removable vessels – 6 sets with PTFE cap, Highly thermal stable alloy screw cap withstand high temperature expansion and reaction pressure. Nanoparticle synhtesis compatible with uniform heat transfer inside reaction vessel. 5 years warranty for the unit under standard operating conditions.