TYPICAL SPECIFICATION

The fume cupboards shall be the "Safe-Tee" Series 2000 type of **"ASAH®"** construction. The sizes and services required shall be as detailed on the drawings or schedule of equipment.

They shall be of the aerodynamic bench mounted type and be constructed in accordance with AS/NZS 2243.8, AS/NZS 2430.3, AS/NZS 3000, AS/1530.3 and AS 1482.

The inner chamber shall be manufactured from **"ASAH®"** material with a smooth radius on all internal corners. Where alternate materials are offered they must achieve results of 0, 0, 0 and 4 respectively for ignitability, spread of flame, heat evolved and smoke developed when tested to AS 1530.3-1989.

The front facia shall be a picture frame type with aerofoil entry on all sides, top and bottom and be manufactured in one (1) piece from a chemical resistant and flame retardant EPC. The front facia shall extend the full height of the fume cupboard and the enclosure for the wiring and controller must be fully enclosed.

The working base of the chamber shall be **"ASAH®"** and must be fully sealed, with radiused corners, to the sides and back, to form an integral part of the chamber. The base shall also incorporate a raised lip at the front to minimise hazards of spillage towards the operator, and shall be radiused to reduce turbulence. Sink sump bases are not recommended because of the potential for accumulation of chemicals and fumes in the void.

Sinks, tundishes and runnels, if fitted, shall be of a material suitable for the application and must be fitted from the underside of the base and fully sealed.

The sash front shall be of the vertical type, glazed with 6mm clear toughened glass and counter balanced by two weights, concealed behind the facia, at the front of the cupboard and supported by stainless steel cables running over ball bearing pulleys. The bottom of the sash should have a full length aerofoil section and the sash wires shall be connected to a bottom rail, not the glass.

A minimum opening of 100 mm should remain when sash is fully lowered.

The fume cupboard shall be fitted with three (3) **"ASAH®"** baffles which shall be pre-set and non adjustable to achieve an even airflow through the face opening. They must be easily removable without the use of any tools.

The fume cupboard is to be fitted with a 30W, HPF fluorescent light mounted in a purpose made cover and shall provide illumination at the work surface, to a

minimum of 400 Lx, through a sealed clear toughened glass panel at the top of the chamber external to the fume area.

Flammable gases, inert gases and water services shall be supplied as scheduled or as shown on the drawings. The outlets are to be mounted on the inner side walls of the chamber and the control valves shall be mounted on the facia panel of the support bench so they do not cause turbulence at the face entry. Flammable gas supply shall be fitted with a solenoid valve to isolate supply in the event of low airflow or emergency isolation.

The fume cupboard shall be fitted with a, user friendly, "Safe-Tee" control system with LCD display which indicates the status of the system. The controller shall comply fully with AS/NZS 2243.8, AS/NZS 2430.3.6 AND AS/NZS 3000. Over and above the requirements of the standards the controller will incorporate the features of the **Conditionaire** V5 or V6 depending on the specific functions required. The V5 controller is to be used for constant airflow and the V6 for variable airflow. The control system will incorporate two (2) RCD protected DGPOs.
(Refer V5 or V6 controller specification.)

For energy saving airflow systems the fume cupboards shall be fitted with "IVAC" infinitely variable airflow systems. The exhaust rate shall be directly proportional to the sash position and have a response time of not greater that five (5) seconds. When in the lowered position the flow rate must not fall to a point where less than five (5) air changes per minute are achieved.
(Refer IVAC specification).

Cable port entries, if scheduled, shall be fitted in the side of the fume cupboard a minimum of 150 mm above the base. They are to have a self-sealing neoprene star gasket fitted.

Commissioning and NATA testing is to be carried out by NATA accredited personnel and shall be in accordance with AS/NZS 2243.8, Appendixes A,B & F. All auxiliary systems within the laboratory shall be operational, as for the working laboratory, prior to commissioning being carried out.