



**LOCATION DETAILS**

**School/Branch:** School of Molecular & Biomedical Science

**SAFE OPERATING PROCEDURE DETAILS**

Using the School's vacuum aspiration system

Date Prepared: 06/04/2007

**PREPARED BY:** Name, position, & Signature (insert names of supervisor, HSO, subject matter expert)

Tony Richardson – School Safety Co-ordinator

Signature:

**RISK ASSESSMENT**

Has a risk assessment been completed and all other environmental considerations been made?

See risk assessment dated:

TBA

Risk Rating:

- Low
- Medium
- High
- Very High

**NO**

**RISKS IDENTIFIED**

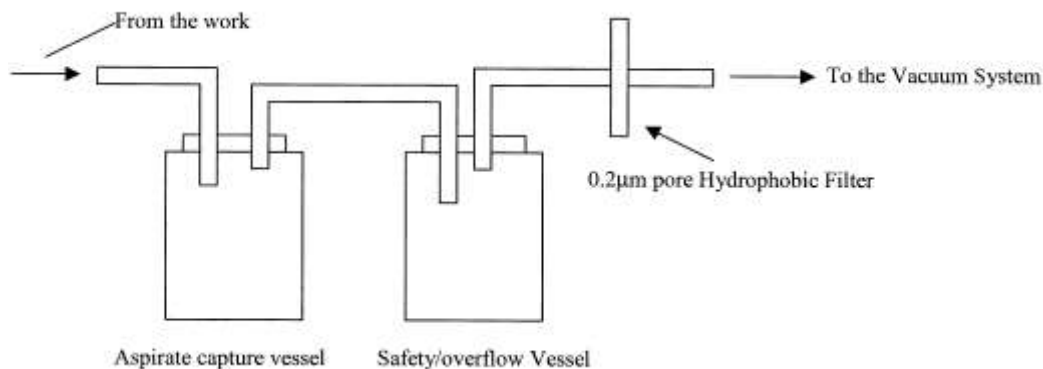
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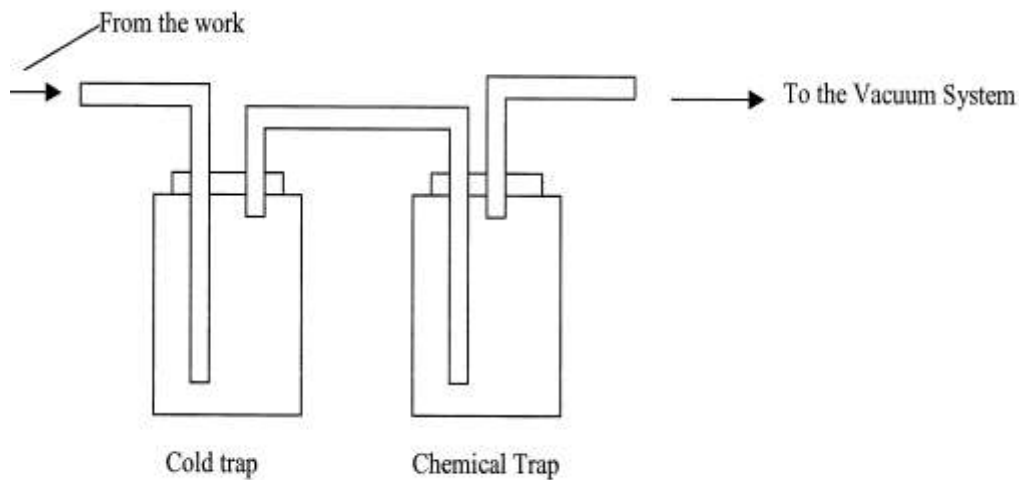
**SAFETY PRECAUTIONS**

The following control measures **MUST** be adhered to:

- Use a double vessel system (see diagram below). It is essential that no liquid or harmful vapour reach the vacuum pump or reticulation piping.
- Use a 0.2 micron hydrophobic filter (see diagram below) when working with biological material, especially micro-organisms.
- Use chemical trapping systems (see diagram below) to absorb harmful and/or dangerous vapours. (While chemically resistant pumps can be purchased, they are proven to not be 100% chemically resistant and the problem of the dangerous vapour exiting the pump still exists.

NOTE: The MLS vacuum reticulation pipe is copper, a reactive metal with acid, alkali and many other substances.





The composition of the vapour must be known and appropriate traps put in place to remove all harmful substances i.e. all those that, if allowed to reach the pump and the environment can cause harm.

Options available:

- Cold trap (water, other vapours with freezing points of -10C or higher)
- Soda Lime (acid vapours)
- Activated charcoal (organic vapours – not applicable if there is any acid vapour)
- Molecular Sieve (several types exist applicable to different organic vapours).

If only one type of vapour is present, then only one trap may be needed.

#### **PERSONAL PROTECTIVE EQUIPMENT REQUIRED**

The following PPE must be worn at all times:

- N/A

#### **SAFE OPERATING PROCEDURE**

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#### **OTHER INFORMATION**

- The school has a reticulated vacuum system in the MLS building and a number of smaller individual systems in the MLS and Medical School.
- Such systems present multiple opportunities for injury, failure to meet OGTR and AQIS responsibilities and damage to the vacuum system

#### **ADMINISTRATION**

Note: This Safe Operating Procedure must be reviewed :

- a) after any accident, incident or near miss;
- b) when training new staff;
- c) if adopted by new work group;
- d) if equipment, substances or processes change; or
- e) within 5 years of date of issue.