Fumehoods and Venting

Research labs designed for use with volatile hazardous material have been built with fumehoods.

For those who use fumehoods or expect to, we strongly recommend you look at the online fumehood training course which is available on the Science Safety Program course in Blackboard. Instructions for enrolling in the course are at <http://www.trentu.ca/scienceservices/safety/training.php>. For more information on working with Chemicals see the Science Safety Program, Chemical Safety Program.

Most fumehoods in the labs are a standard constant air volume (CAV) or variable air volume (VAV) chemical fumehood, but there are other speciality hoods around as well.

Vertically Exhausted Laminar Flow Fumehoods (VELFFs) are a cross between a laminar flow hood and a fumehood. Designed for product and people protection, the air supplied to the hood is usually HEPA filtered but is exhausted into a standard fumehood stack. Supply and exhaust air flow rates are usually calibrated together to make sure the hood functions properly.

Perchloric Acid Hoods are specially designed hoods for use with concentrated Perchloric acid. Perchloric acid can form explosive peroxide salts on cabinet walls and stacks. If peroxide salts come in contact with organic material an explosion may result. Perchloric hoods are designed with a wash down feature which will dissolve the salts and ensure that the stack and cabinet are free of the peroxide salts. Use of the percholoric acid hood is restricted to those who have been trained in its use and wash down procedure. Contact Science Facilities for more details.

Venting

In addition to fumehoods, some labs have localized exhaust canopies or snorkels installed.

Canopies are typically installed in locations where exhaust is required to either vent a heat producing instrument or to remove exhaust which may contain hazardous material from an instrument.

Snorkels have been installed in labs where there is a requirement to have a moveable exhaust port usually over a lab bench. Snorkels can be used for fine particulates, odours and chemicals that have a point source origin. Snorkels are not a replacement for a fumehood. If containment is required then a fumehood should be used.