



# SAFETY ALERT

**Human Resources  
Occupational Health and Safety**

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**Handling of Acids and Incompatible Materials**

**August 13, 2008**

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A Ministry of Labour directive resulting from an explosion in a laboratory fumehood has prompted Occupational Health and Safety to issue this Hazard Alert.

An experiment involving nitric and sulphuric acid was being conducted in a laboratory fumehood. Mixing nitric and sulphuric acid may cause an exothermic reaction generating nitrogen dioxide gas. The waste generated was collected in a single waste bottle resulting in a mixture of waste acid which reacted and resulted in an explosion. The explosion propelled glass and acid residue out of the fumehood, covering many surfaces of the lab.

The University HazMat team and London Fire Department responded.

Before handling acids or any incompatible materials, Occupational Health and Safety reminds all chemical users at the University of the following:

- Workers must be specifically trained in the use of each chemical.
- Workers must be trained in the use and location of emergency equipment.
- Workers must consult the valid Material Safety Data Sheet (MSDS) for the material(s) being used; a valid MSDS is provided by the supplier of the material and has been issued within the past three years.
- Laboratories must store acids and all chemicals compatibly, according to the product label and MSDS.
- Workers must use a fumehood and personal protective equipment (PPE) such as chemical splash goggles, gloves and protective clothing when using acids and other chemicals as specified in the PPE section of the MSDS.
- Laboratories must supply and designate containers for the proper segregation of waste material.