

## Risk Control Categories for the Use of Chemicals at ANU

### Work protocols and risk assessment

- The specific work protocol must be documented and a risk assessment undertaken (see ANU's Chemical Safety manual).
- The risk assessment will allocate one of four increasing levels (with sub-levels) of risk to the work protocol, as follows:

low risk	category <b>A</b>
moderate risk	category <b>B1</b> (lower moderate risk) or category <b>B2</b> (higher moderate risk)
significant risk	category <b>C1</b> (lower significant risk) or category <b>C2</b> (higher significant risk)
high risk	Note that any work judged as high risk will require detailed research and planning and must not be undertaken without OHS Unit input and senior management approval.

- The assignment of a risk assessment category will be influenced by the nature of the work, the quantities involved, the laboratory facilities available, and the training and experience of both the individuals undertaking the work and their supervisors.
- For risk assessments of category A, category B1, and category B2, the risk assessment shall be entered into the individual's workbook and the control requirements given below for the relevant category must be used when undertaking the work.
- For risk assessments of category C1 and category C2, a brief description of the special control procedures, precautions, locations, etc. used to control the specific hazard(s) shall be recorded in the individual's workbook before the work commences. It is mandatory that the proposed system of work be approved by the research group leader or equivalent before work commences. The pro forma for this documentation is given below under category C1 and category C2.

## **Risk control practices for Risk Categories A-C**

### **Category A (low risk) control practices**

Examples of category A (low risk) work would include the use of non-hazardous chemicals and the undertaking of spectroscopic or other physical measurements on small volumes of chemicals.

EYE PROTECTION MUST BE WORN AT ALL TIMES where chemicals are being used.

A laboratory coat or gown and suitable footwear must be worn.

Gloves are routinely recommended.

Appropriate general and local exhaust ventilation is beneficial.

Good housekeeping is critical.

Use work practices that minimise the generation of gases, vapours and aerosols. Do not mouth pipette. Consumption or storage of food and/or beverages in the laboratory is forbidden.

ANU staff and post-graduate students must have a competent understanding of the relevant sections of ANU's Chemical Safety series of manuals (<http://www.anu.edu.au/hr/ohs/policies/chempro.html>) and any laboratory safety regulations of their Area before commencing laboratory work.

### **Category B1 (lower moderate risk) control practices**

Examples of category B1 (lower moderate risk) work would include the small-scale use of low-risk chemicals in solvent transfers, storage, drying, extraction, chromatography, cleaning, and small-scale non-hazardous reactions.

Category A practices MUST BE IN PLACE AT ALL TIMES.

Use of a fume hood is advisable.

Use of gloves is advisable.

### **Category B2 (higher moderate risk) control practices**

Examples of category B2 (higher moderate risk) work would include the small-scale use of chemicals that are known to be mildly toxic, irritant, corrosive and the use of chemicals where no toxicological data are available but which are judged to be of low risk on the basis of a generic assessment.

Category A and B1 practices MUST BE IN PLACE AT ALL TIMES.

Fume hood or Schlenk line must be used.

Gloves of appropriate composition must be worn.

Goggles or face shield may need to be worn to provide improved eye protection.

### **Category C1 (lower significant risk) control practices**

Examples of category C1 (lower significant risk) work would include the use of chemicals known to be significantly oxidising, pyrophoric, flammable, corrosive, toxic, irritant, pungent, sensitising, mutagenic, teratogenic, carcinogenic, react violently with water or chemicals where no toxicological data are available but which are judged to be of moderate risk on the basis of a generic assessment.

Category A practices MUST BE IN PLACE AT ALL TIMES.

Special personal protection such as goggles, face shield, respirator or clothing may be required.

Safety shield may be required.

Special fume cupboard with appropriate scrubber may be required.

Appropriate administrative restrictions must be put in place including: work to be done during standard hours, experienced colleague to be in attendance, first aid antidotes, emergency procedures.

### **Category C2 (higher significant risk) control practices**

Examples of category C2 (higher significant risk) work would include those chemicals and procedures that require a special facility or location, such as potential explosives (including sealed tubes), high pressure reactions, large scale reactions, and category C1 chemicals considered of higher significant risk. The category would also include chemicals where no toxicological data are available but which are judged to be of significant risk on the basis of a generic assessment.

Category A, B2 and C1 practices MUST BE IN PLACE AT ALL TIMES.

Appropriate special facilities or locations must be provided.

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