General procedures for handling radioactive materials on campus

Ordering of radiochemicals

(i) North Campus

For information on procedures for the purchase of radioactive materials please contact your Radiation Protection Supervisor or Dr Ewan Blanch the campus Radiation Protection Officer

(ii) South Campus

All radioactive materials from commercial suppliers must be ordered through the Radiation Safety Unit, where a central register of materials on-site is maintained and checked against the university's Registration document.
In exceptional circumstances, the items listed below may be ordered directly by individual Schools, but the Radiation Safety Unit **must** be provided with relevant details of the order, **prior to the shipping date:**

- non-standard radiochemicals from other sources (e.g. research establishments)
- free samples of radioactive materials from commercial suppliers
- certain specialised very low activity kits.

Radioisotope Suppliers

Delivery of radiochemicals

All radiochemicals ordered via the Radiation Safety Unit are delivered from the suppliers, by specialist carrier, direct to the Radiation Safety Unit laboratories in the Williamson Building.

The Radiation Safety Unit staff will sign for all deliveries, check off each item with the central ordering record, and take the packages to the designated collection point (e.g. Stopford Building central stores).

Most packages delivered to the University are either "excepted" (exempt), or "Type A", packages which contain limited activity and have been specifically designed so that no radiation hazard should arise even in the case of an accident.

Packages must never be left unattended during transit to the user's laboratory. Any specific Local Rules must also be observed.

On receipt by the user each order should be unpacked, and the packing materials carefully checked for contamination before disposal as non-radioactive waste. Any radiation warning signs on the packaging must first be removed and/or obliterated. The Radiation Safety Unit must be notified immediately if any items are missing or if there are any discrepancies between the item ordered and that received, e.g. wrong quantity or code number. The radioactive material should then be placed in a **secure locked store** until needed.

Transport of Radioactive Material (both Campuses)

The transport of radioactive substances must comply with the *Regulations for the Safe Transport of Radioactive Materials* issued by the International Atomic Energy Agency in

1985, and also to the relevant UK legislation, e.g. *The Radioactive Material (Road Transport) (Great Britain) Regulations 2002*. Most transport of radioactive materials will involve either *excepted* or *Type A* packages. Exemptions from some of the requirements are possible for excepted packages which contain only small quantities of radioactive material, and for instruments and articles which have radioactive materials as components. Type A packaging has to pass stringent performance tests. Details of the activity limits and other conditions for excepted packages are given in **IRR99**.

Within the university

Hand held containers can easily slip from wet fingers and glass vials can break. In both cases, contamination is the result. Radioactive substances being moved around the University from room to room, or between Schools **in the same building**, must therefore be in suitable receptacles, which must (a) be non-breakable and (b) provide adequate shielding for the substance in question. The fundamental aim is to control radiation exposure and contain the radioactive material during its movement by hand within a university building, which may involve crossing public-access areas (corridors etc). Such movement is thus subject to the following restrictions:

- Movement of radioactive substances, other than unopened packages from commercial suppliers, may only be undertaken by trained Radiation Workers
- All substances, including sealed sources, must be carried in containers which provide adequate shielding for the isotope in question
- Containers should be robust enough not to break if dropped, and should either be packed with sufficient absorbent material to contain a spill, or adequately sealed to prevent leakage if overturned
- The item must be delivered to its destination without delay and not left unattended unless satisfactory arrangements have been made for secure temporary storage, and adequate shielding is provided where necessary

Outside the University

Please contact the Radiation Safety Unit for information of transport of radioactive materials from the university to another site.