

University of St Andrews - School of Medicine Handbook
SPECIFIC RULES AND REGULATIONS RELATING TO
RADIATION SAFETY

1. **Ionising Radiation.** Before undertaking work with radioisotopes you are required to:
 - a. register as a **User of Ionising Radiations** by completing a University Registration Form (available from the School Radiation Safety Adviser).
 - b. have attended a Radiation Protection Course either at this University or at another approved Establishment.
 - c. complete an approval of project form (in consultation with the School Radiation Safety Adviser) and receive approval from the Head of School (delegated to Building Chairmen) and the University Radiation Protection Adviser.
 - d. read the University Safety Publication entitled '**University Local Rules for Work with Ionising Radiations**' which is available for consultation at: <http://www.st-andrews.ac.uk/staff/policy/Healthandsafety/Radiation/Localrulesforionisingradiation/>
2. **Non-ionising radiation (Ultraviolet radiation).** The use of equipment which emits ultraviolet radiation, by design or as a by-product of a particular process, may expose University staff and other persons, whether at work themselves or not, to ultraviolet radiation at levels which may give rise to adverse health effects either short lasting (acute) or long-lasting (chronic). It is therefore important to avoid unnecessary exposure by implementation of administrative controls, engineering controls and, under certain circumstances, by the use of personal protection.
 - a. Administrative control measures include: limitation of access, hazard awareness, the use of hazard warning signs and lights, and distance as a safety factor and limitation of exposure.
 - b. Engineering controls include: containment, the use of interlocks, and elimination of reflected ultraviolet radiation.
 - c. Personal protection includes both protection of the skin and the eyes. Skin protection may be accomplished by the wearing of ordinary visually-opaque materials such as laboratory coats. Hands may be protected by the use of disposable polyvinyl chloride gloves. Gloves made of polythene afford considerably less protection. Protection of the eyes against ultraviolet radiation is given by glass, perspex or polyvinyl chloride goggles, spectacles or face-shields.

Note: standard laboratory safety spectacles and goggles may not afford protection against UV-A or UV-B radiation. Spectacles, goggles and face shields which can afford protection from ultraviolet radiation are clearly marked as such.
3. Further information on working safely with ultraviolet radiation may be found in the University Safety Publication entitled '**University Local Rules for Work with Non-Ionising Radiations, Part 2: Ultraviolet Radiation**' (available for consultation from the School Safety Coordinator) and the HSE web pages dealing with Non-ionising radiation at: <http://www.hse.gov.uk/radiation/nonionising/index.htm>
4. **Lasers.** It is important to realise that levels of exposure which should not be exceeded at the surface of the eye (i.e. the cornea) for visible radiation are very low indeed and it is obvious that nearly all lasers will give rise to energy or power densities in their direct beam which are greater than the Maximum Permissible Exposure Levels recommended for the cornea. In many cases refracted, reflected or scattered radiation will also exceed these levels. It is therefore clear that appropriate precautions must be taken when any laser device is used. Please consult the School

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Laser Safety Adviser before use with any laser. Laser types 3B and 4 should be inspected by the University Laser Safety Supervisor. New laser devices should only be purchased or constructed after consultation with the School Laser Safety Adviser.

5. **All** personnel working with lasers must read the '**University Local Rules for Work with Lasers**' (1992) which is available for consultation at: <http://www.st-andrews.ac.uk/media/environmental-health-and-safety-services/Laser%20Safety%20Policy%20-%202006%20FINAL%20Version.pdf>. In addition they must be registered with the School Laser Safety Adviser and the University Laser Safety Supervisor. All workers **must** undergo the laser safety training provided by the University Laser Safety Advisor prior to starting work.

6. **Laser pointers.** Only laser pointers marked **CLASS 2** should be ordered or used. Any laser pointers *above* **CLASS 2** should be withdrawn from use. If in doubt contact the School Laser Safety Advisor.