



The University of Sheffield

Safety Services



## PERSONAL MONITORING DEVICES

### A. OSL BODY BADGE

OSL (optically stimulated luminescence) badges are issued on a 3-month calendar quarter basis. With this new body badge the detector and filter assembly is in a sealed unit that is clipped into a badge holder. You retain the badge holder and just unclip the old badge each issue. The badge encapsulates a layer of aluminium oxide (to absorb the energy of the radiation) and filters to distinguish between different energies of radiation. The stored energy in the aluminium oxide crystals is released by scanning the detector with a laser and measuring the light emitted - hence the term optically stimulated luminescence. NB people whose work involves the use of neutrons will have a special badge that also incorporates a solid state nuclear track detector.

Your badge should be worn at all times when exposure to ionising radiations is likely. In general they are worn on either lapel of your laboratory coat. If, however, you feel that some other part of your body may receive a larger dose it should be worn as near to that site as possible.

Please assist your Departmental Radiation Protection Supervisor by ensuring that your badge is available for changing at the end of the wear period. Prompt changing of badges helps all concerned and makes the dose results available sooner.

### B. TLD FINGER RING

These ring badges are used to monitor the hands of personnel who come into close contact with radioactive material or are engaged in other activities where their extremities may be exposed to an X-ray beam. Typically they are issued to people working with significant amounts of P-32 or other hard beta-gamma emitters.

They are issued on a monthly basis and are available in 3 sizes - small, medium and large. Unless otherwise instructed the standard medium size will be issued. For ease of recognition the left hand ring will be black and the right hand ring red.

The TLD chip is encapsulated inside the identification cover. The whole ring is returned at the end of the wear period, please do not disassemble.

## **NB**

**OSL detecting elements are reusable and expensive and the badge is a legal record of radiation exposure. Deliberate loss of a badge is an offence. Therefore if you lose or do not return your badge you will be charged £40.**

**Personal dosimeters are issued for use by the named person at the University of Sheffield only. They are not to be used by any other person or to be taken to be used at any other establishment. If monitoring is required at another establishment it should be provided at that establishment.**

---