

Operating procedures

Ensure that the Cs-137 strength is greater than 85 mCi prior to calibrations. If source is replaced, verify against license limits since calibrator can hold a maximum of 200 mCi of Cs-137.

1. Authorized users will only use Cs-137 source.
2. Authorized users will wear whole body monitoring devices.
3. Authorized users will use time, distance and shielding to reduce radiation exposure.
4. Authorized users will not place their hands or fingers in the radiation beam.
5. Area will be clear of all personnel unless they are calibrating instruments or under training by an authorized user.
6. The Cs source will be placed inside a lead cave prior to use.
7. The Cs source will face towards the outside of the building.
8. The Cs source will remain close at all times when calibrations are not being performed.
9. Personnel will use a calibrated survey instrument to monitor dose rates before, during and after calibrations to confirm the position of the radiation source.
10. The Cs-source calibration area will remain under direct surveillance while the Cs source is un-secured.
11. Attenuators will be used for all instrument calibration. Authorized users will follow the procedure in the QSA Operating Manual for the 773 for the proper use of the attenuators.
12. Survey meter calibrations will be done at 20% and 80 % full scale for instruments having a maximum scale of 2000 mR/hr.
13. Rate meters will be calibrated at two points of scale. (Example 160 mR/hr and 0.4 mR/hr)
14. Pocket dosimeters will be placed at a single distance and will be checked using one and two minutes exposure times.
15. If calibration is off by more than 20% of calculated reading, the unit will not be calibrated and returned to the owner for repairs.
16. When calibrations are finished, the handle will be locked and placed in a lockable cabinet.
17. Keys for the lockable cabinet and Cs source are restricted to the RSC chairman and the RSO.

The following information will be attached to the survey meter instruments as a calibration sticker:

1. The date of calibration and the next calibration due date;
2. The apparent exposure rate or count rate from the check source, if used.
3. Initials of the individual calibrating the survey meter.

The following information will be provided with the instrument as a calibration certificate:

1. The source isotope used to calibrate the instrument (with correction factors) for each scale;
2. For each scale or decade not calibrated, an indication that the scale or decade was checked only for function but not calibrated;
3. For each scale or decade not working, an indication that the scale or decade can not be used (Do Not Use);
4. The date of calibration;
5. The dose rate at 1 meter, if applicable;
6. The calculated and measured exposure rate or count rate
7. The attenuators, if used;
8. The distance the measurements were taken.
9. The apparent exposure rate or count rate from the check source, if used.