

MALRAD SCENARIO 3



Background:

A scientist from a large medical research facility is admitted to hospital suffering from what appears to be radiation sickness. The relevant authorities are alerted and upon discovery that the scientist does not work with radioactive materials, a search is initiated of the facility, its grounds and his home by search teams equipped with dose meters and a range of detectors. One team registers anomalous dose readings in the vicinity of what turns out to be the scientist's car and a spectrum is taken using a small CdZnTe (3 cc) detector from the hospital's medical physics department. A point source of ^{241}Am , ^{137}Cs and ^{60}Co was measured to establish the energy calibration. A dose meter was also used to establish the direction of maximum dose and two measurements were taken: the first of these was 1.8 m from the side of the car where the dose was $229\text{ }\mu\text{Sv/hr}$ and one 2 m further back where the dose was $57\text{ }\mu\text{Sv/hr}$.

Materials provided:

Two spectra, in a number of formats are provided.

Scenario_3_source.(range of formats) - the spectrum obtained from outside the car with the CdZnTe detector.

Scenario_3_point.(range of formats) - spectrum of the point source taken earlier.