

Shielding of Portable High Purity Germanium Detectors for Use in Stand Alone Configuration

A low weight, portable High Purity Germanium detector, n-type, 55% efficiency has been tested and characterised for the purpose to evaluate its use in an OSI field laboratory. This detector has been proved reliable and robust in field conditions but some further tests need to be performed in order to assess its reliability and efficiency in a laboratory like configuration. One main aspect to be considered is the need of a dedicated shielding in order to achieve a lower background signal and to identify small activity in the samples. The shielding structure has been designed and implemented in a horizontal configuration and the performances of the detectors have been measured. Different configurations and set up will be discussed in order to verify the suitability of this type of detectors for the OSI field laboratory.

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