

## Characterisation, Performance Assessment and Improvement of a Small Anode Germanium (SAGe) Well Detector for Environmental Applications.

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In environmental gamma-ray spectroscopy, it is essential that the detectors employed have high efficiency and excellent energy resolution in order to give accurate assessment, identification and quantification of radionuclides present in the sample being measured.

As part of a joint project with the Environmental Radioactivity Research Centre at the University of Liverpool a Mirion Technologies (formerly Canberra) Small Anode Germanium (SAGe) well detector was used to measure a number of small volume environmental samples.

The SAGe well detector is a high purity germanium detector which offers excellent resolution and high efficiency as samples are placed within the well for data collection.

The high resolution at low energy gamma-ray energies are achieved by using point-contact electrodes. As these detectors are relatively new there is a requirement to fully understand their performance with the intention to improve its measuring capabilities.

Data will be presented for this detector.

**Primary authors:** BOSTON, Helen (University of Liverpool); NOLAN, PJ (University of Liverpool); UNSWORTH, C (University of Liverpool); APPELBY, P (University of Liverpool); THOMAS, O (University of Liverpool)

**Presenter:** BOSTON, Helen (University of Liverpool)

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