

## **Comparison of Be-7 analysis using two gamma spectrometry systems and software packages**

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Naturally occurring radioisotope, Be-7, can be used to study short term deposition and resuspension cycle of surficial bed sediments. The activity of Be-7 can be determined by gamma spectrometry. Due to Be-7 short half life, samples must be analysed within a few days of collection on several gamma spectrometry systems. To test the precision of Be-7 data from two gamma spectrometry systems and software packages, multiple analysis of a sediment sample was performed over 6 months. A statistical procedure was used to investigate the precision of the analytical data as the activity of Be-7 decreases over time. The sample was prepared from a sediment sample spiked with Be-7 activity, collected from fresh rain water, and counted on High Purity Germanium (HPGe) gamma spectrometry systems from EG&G Ortec and Canberra. Software packages Gamma Vision and Genie-PC were employed to determine peak areas and activity calculations. Calculations were also performed manually by visual determination of the Be-7 peak region of interest and simple gamma spectrometry calculation procedure.