



Contribution ID: 69

Type: Poster

Gamma-gamma coincidence measurements of naturally occurring radioactive materials

Measurements of activity concentration using gamma - gamma coincidence is better than single measurement in terms of minimizing spectrum background, summing effects and pulse pile-up \cite{metwally}. Detection limits can be improved by eliminating the internal activity in $LaBr_3:Ce$ scintillator through gamma - gamma coincidence condition \cite{Drescher}. An array of $LaBr_3:Ce$ (2" by 2") detectors connected to a Digital Signal Processing system were used for measurement of natural occurring radioactive materials (NORM) in 1L Marinelli beakers for particular measurements with U ore and Th ore. Gamma - gamma coincident spectra were generated by setting software gates on $\gamma - \gamma$ matrices associated with the U and Th ore samples respectively. The results of these measurements will be presented and discussed.

Primary authors: Ms BASHIR, M. (Stellenbosch University/iThemba LABS); Prof. NEWMAN, R. T. (Stellenbosch University); Dr JONES, P. (iThemba LABS)

Presenter: Ms BASHIR, M. (Stellenbosch University/iThemba LABS)

Track Classification: Track A