DETERMINATION OF PROPER PEAKING TIME FOR ULTRA-LEGE DETECTOR AT MEDIUM ENERGIES

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Reducing count losses and pile-up pulse effects in quantitative and qualitative analysis is necessary for accuracy of analysis. Therefore, the optimum peaking time for particular detector systems is important. For this purpose, pure Se and Zn elements were excited by 59.5 keV γ-rays from a 50 mCi ^{241}Am annular radioactive source in this study. The characteristic x-rays emitted from pure Se and Zn elements were detected by using an ultra low energy Ge (Ultra-LEGe) detector connecting Tennelec TC 244 spectroscopy amplifier at different peaking time modes. Overall pulse widths were determined by HM 203-7 oscilloscope connecting amplifier. The proper peaking time for ultra low energy germanium detector (Ultra-LEGe) is determined about 4 μs.

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