

A NEW TOOL IN THE EVALUATION OF GAMMA-RAY SPECTRAL ANALYSIS SOFTWARE.
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A variety of approaches have been taken in the evaluation of the performance of gamma-ray spectral analysis software. These studies have been limited by the number of spectra used in the evaluation and/or the realism of the spectra. By harnessing the power of a modern personal computer and the automation abilities of gamma-ray spectra analysis software we can better understand the behavior of the spectral analysis software package. This is accomplished by acquiring 2,000 sequential 1-minute spectra from an actual sample matrix. These spectra are then randomly co-added to create a collection of 100 spectra representing acquisition duration's of 1 to 100 minutes (10,000 total spectra). Each of these 10,000 spectra can then be analyzed and the relevant information extracted and summarized. From this summarized data we can look at the precision and accuracy of the reported results as a function of acquisition duration for the counted sample.