

Abstract

Mohamed A Abdelrasoul

Solution of the Standard Source Lack in Quantitative Radioactive Samples Analysis

Abstract. Determination of detector efficiency is very important for a wide range of activation analysis applications. The presence of a standard source has the same shape of the sample is the main problem in quantitative analysis. In this work, a new theoretical method used to calculate the full energy peak efficiency (FEPE) which depends on the efficiency transfer principle and the direct mathematical method. Different geometries of cylindrical sources were used for the calibration process of two different scintillation detectors. It was found that, the theoretical and the experimental (FEPE) values are in a good agreement.