

## 1 test

The half-life of Ba-137m and the Poisson and Gaussian probabilities for Am-241 can be calculated by collecting the activity and time period obtained from radioactive decay. Using a Geiger-Müller tube and software such as *CASSY Labs* and Excel it is possible to do so. The values obtained for half-life are  $t_{1/2\text{-CSY}} = 2.73 \pm 0.03$  mins and  $t_{1/2\text{-EXL}} = 2.92 \pm 0.07$  mins, which are consistent with literature. The experimental probability does not fit the theoretical probability distributions due to incomplete data set.