Record Nr. UNINA9910135783003321 ANSI N42.25-1997: American National Standard Calibration and Usage **Titolo** of Alpha/Beta Proportional Counters / / Institute of Electrical and **Electronics Engineers** Piscataway, New Jersey:,: IEEE, , 1997 Pubbl/distr/stampa **ISBN** 0-7381-0749-2 Descrizione fisica 1 online resource (32 pages) Disciplina 621.372 Calibration - Standards Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto This standard establishes methods for the calibration and use of gas proportional counters with and without active guard detectors. This standard also establishes methods for measuring the alpha and beta counting plateau, crosstalk factors, background, alpha and beta efficiency from prepared standards, correction factors for samples whose self-attenuation or mass differs from that of the standard, and calculation of the sample activities together with their random and total uncertainties. Correction for pulse pileup due to high count rate is also discussed. Although many principles articulated in this standard apply to the counting of radionuclides emitting a maximum beta energy below 100 keV as well, the counting of these low-energy beta emitters requires a higher degree of attention to detail in sample preparation. instrument calibration, and measurement correction factors than addressed in this standard. Therefore, this standard is intended for

measuring radionuclides with maximum beta energies above 100 keV.