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Sommario/riassunto	<p>Minimum performance specifications and testing methods for the evaluation of alarming personal radiation detectors, also known as PRDs, are contained in this standard. These detectors are pocket-sized and carried on the body. These instruments are primarily designed for the detection and location of radioactive materials emitting gamma rays, and possibly neutrons, and not intended to function as electronic dosimeters. The specifications for general, radiological, environmental, electromagnetic, and mechanical performance are given, and the corresponding testing methods are described. The documentation to be provided by the manufacturer is listed as part of the requirements. A number of informative annexes that provide useful information and guidance in implementing this standard are also contained in this standard. Scope: This standard describes minimum performance requirements and test methods for evaluating the performance of alarming personal radiation detectors (PRDs) for homeland security applications. PRDs are pocket-sized battery-powered alarming electronic instruments that are worn on the body and used to detect photon-emitting, and optionally neutron-emitting, radioactive materials. PRDs have user-readable displays related to the intensity of radiation, but they are distinct from, and typically more sensitive than, electronic personal dosimeters, which are designed to measure the</p>

dose equivalent to workers occupationally exposed to radiation. The performance criteria contained in this standard are meant to provide the means for verifying the capability of the PRDs to reliably detect changes above background levels of ionizing radiation fields and alert the user to these changes. This standard also specifies the requirements and test methods for environmental, electromagnetic, and mechanical conditions that may affect the ability of the PRDs to function properly. This standard does not apply to spectroscopic PRDs that have the ability to identify radionuclides. The ANSI N42.48 standard [B12] covers spectroscopic PRDs.¹ This standard does not apply to instruments that are primarily intended to provide a measurement of dose-equivalent, personal dose-equivalent, or ambient dose-equivalent rate. However, if the manufacturers of PRDs that provide an indication of personal dose-equivalent rate (expressed in units of mrem/h or Sv/h) claim that the PRD may be used for personal protection, then the PRD shall comply with the applicable radiological requirements described in ANSI N42.20 [B17] (i.e., accuracy, energy, and angle response tests). Purpose: This standard specifies the performance requirements and test methods used to evaluate PRDs.
