

ISO 6980-2:2004-10 (E)

Nuclear energy - Reference beta-particle radiation - Part 2: Calibration fundamentals related to basic quantities characterizing the radiation field

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Calibration and traceability of reference radiation fields	4
5	General principles for calibrations of radionuclide beta-particle fields	5
5.1	General	5
5.2	Scaling to derive equivalent thicknesses of various materials	5
5.3	Characterization of the radiation field in terms of penetrability	6
6	Calibration procedures using the extrapolation chamber	6
6.1	General	6
6.2	Determination of the reference beta-particle absorbed-dose rate	7
7	Calibrations with other measurement devices	8
7.1	Calibrations with thermoluminescence dosimeters	8
7.2	Calibrations with thermally stimulated exo-electron emission dosimeters	8
7.3	Calibrations with ionization chambers	8
7.4	Calibrations with scintillator detectors	9
8	Measurements at non-perpendicular incidence	9
9	Uncertainties	9
Annex A (informative) List of symbols		16
Annex B (normative) Extrapolation chamber measurements		19
Annex C (normative) Extrapolation chamber measurement correction factors		23
Annex D (informative) Example of an uncertainty analysis		31
Bibliography		35