

ISO 6980-1:2022-10 (E)

Nuclear energy - Reference beta-particle radiation - Part 1: Methods of production

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Requirements for reference beta-particle radiation fields at the calibration distance	2
4.1	Standard test conditions	2
4.2	Energy of the reference radiation fields	2
4.3	Shape of the beta-particle spectrum	3
4.4	Uniformity of the dose rate	3
4.5	Photon contamination	3
4.6	Variation of the beta-particle emission with time	3
5	Radionuclides suitable for reference beta-particle radiation fields	3
6	Source characteristics and their measurement	4
6.1	Fundamental characteristics of reference sources	4
6.1.1	Construction of reference sources	4
6.1.2	Measurement and/or simulation of characteristics of the reference radiation fields	4
6.1.3	Beta particle contamination	13
6.1.4	Photon contamination	13
6.2	Characteristics of the two series of reference beta-particle radiation fields	13
6.2.1	General	13
6.2.2	Series 1 reference beta-particle radiation fields	13
6.2.3	Series 2 reference beta-particle radiation fields	14
7	Source calibration	15
Annex A (normative) Tissue substitutes		17
Annex B (normative) Reference conditions and standard test conditions		18
Annex C (informative) Characteristics of the recommended sources --Examples of source construction		20
Bibliography		21