

ISO/TS 11665-13:2025-12 (E)

Measurement of radioactivity in the environment - Air: radon 222 - Part 13: Determination of the diffusion coefficient in waterproof materials: membrane two- side activity concentration test method

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols	4
5	Principle of the test method	5
6	Measuring system	5
6.1	Components of the measuring system	5
6.2	Configuration of the measuring system	6
7	Test methods	9
7.1	General information	9
7.2	Method A — Determining the radon diffusion coefficient during the phase of non-stationary radon diffusion	10
7.3	Method B — Determining the radon diffusion coefficient during the phase of stationary radon diffusion	10
7.4	Method C — Determining the radon diffusion coefficient during the phase of stationary radon diffusion established during ventilation of the receiver container	11
7.5	Method D — Determining the radon diffusion coefficient during stationary radon activity concentrations in the source and receiver containers	12
8	General application procedures	12
8.1	Preparation of samples	12
8.2	Fixing the samples in the measuring device	13
8.3	Test of radon-tightness, assessment of the radon leakage rate of the receiver container	13
8.4	Determining the radon diffusion coefficient according to method A	13
8.5	Determining the radon diffusion coefficient according to method B	14
8.6	Determining the radon diffusion coefficient according to method C	15
8.7	Determining the radon diffusion coefficient according to method D	17
8.8	General requirements for performing the tests	17
9	Influence quantities	19
10	Expression of results	19
10.1	Relative uncertainty	19
10.2	Decision threshold and detection limit	20
10.3	Limits of the confidence interval	20
11	Quality management and calibration of the test device	20
12	Test report	20
Annex A (informative)	Determining the radon diffusion coefficient during the phase of stationary radon diffusion according to method C	22
Annex B (informative)	Determining the radon diffusion coefficient during the phase of non-stationary radon diffusion	27
Bibliography		35