

ISO 11665-3:2020-01 (E)

Measurement of radioactivity in the environment - Air: radon-222 - Part 3: Spot measurement method of the potential alpha energy concentration of its short-lived decay products

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions and symbols	1
	3.1 Terms and definitions	1
	3.2 Symbols	2
4	Principle of the measurement method	3
5	Equipment	3
6	Sampling	4
	6.1 General	4
	6.2 Sampling objective	4
	6.3 Sampling characteristics	4
	6.4 Sampling conditions	5
	6.4.1 General	5
	6.4.2 Installation of sampling system	5
	6.4.3 Sampling duration	5
	6.4.4 Volume of air sampled	5
7	Detection method	5
8	Measurement	5
	8.1 Procedure	5
	8.2 Influence quantities	6
	8.3 Calibration	6
9	Expression of results	7
	9.1 General	7
	9.2 Potential alpha energy concentration	7
	9.3 Standard uncertainty	7
	9.4 Decision threshold	8
	9.5 Detection limit	9
	9.6 Limits of the confidence interval	9
10	Test report	9
Annex A (informative) Examples of gross alpha counting protocols		11
Annex B (informative) Calculation of the coefficients $k_{218\text{Po},j}$, $k_{214\text{Pb},j}$ and $k_{214\text{Bi},j}$		12
Annex C (informative) Measurement method using gross alpha counting according to the Thomas protocol		16
Bibliography		19