

ISO 13161:2011-10 (E)

Water quality - Measurement of polonium 210 activity concentration in water by alpha spectrometry

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols and units	1
3.1	Terms and definitions	2
3.2	Symbols, definitions and units	2
4	Principle	2
4.1	General	2
4.2	Treatment	3
4.3	Principle of alpha spectrometry	3
5	Reagents and equipment	3
5.1	Reagents	3
5.2	Preparation material and treatment	4
5.3	Alpha spectrometry measuring equipment	4
6	Sampling and samples	4
7	Chemical treatment and deposit process	4
7.1	General	4
7.2	Chemical treatment	5
7.3	Disc cleaning	5
7.4	Deposition phase	5
8	Measurement by alpha spectrometry	6
8.1	General	6
8.2	Quality control	6
8.3	Measurement	6
9	Expression of results	6
9.1	General	6
9.2	Total yield	7
9.3	Activity concentration of ²¹⁰ Po in the sample	7
9.4	Combined uncertainties	8
9.5	Decision threshold	8
9.6	Detection limit	8
9.7	Confidence limits	9
10	Test report	9
Annex A (informative)	Cell deposit examples	11
Annex B (informative)	Spectrum examples	13
Bibliography		15