

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and symbols
4	Principle
5	Chemical reagents and equipment
5.1	Reagents
5.1.1	General
5.1.2	Standard solutions
5.1.3	Wetting or surfactant agents
5.1.4	Volatile organic solvents
5.1.5	Water
5.1.6	Specific reagents for alpha-emitting radionuclides co-precipitation
5.2	Equipment
5.2.1	Laboratory equipment for direct evaporation
5.2.2	General equipment
5.2.3	Special equipment for alpha-emitting radionuclide co-precipitation
5.2.4	Measurement equipment
6	Sampling
7	Procedure
7.1	Preliminary
7.2	Source preparation
7.2.1	Preparation of planchet
7.2.2	Evaporation
7.2.3	Co-precipitation
7.3	Counting stage
7.4	Background and blank determination
7.5	Preparation of counting standard for calibration
7.6	Preparation of calibration source for self-absorption determination
7.6.1	General
7.6.2	Spiking one of two test portions
7.6.3	Self-absorption curve
7.6.3.1	Alpha self-absorption correction
7.6.3.2	Beta self-absorption correction
8	Expression of results
8.1	General
8.2	Alpha activity concentration
8.3	Beta activity concentration
8.4	Standard uncertainty of the alpha activity concentration
8.5	Standard uncertainty of the beta activity concentration
8.6	Decision threshold
8.6.1	Decision threshold of the alpha activity concentration
8.6.2	Decision threshold of the beta activity concentration

8.7	Detection limit
8.7.1	Detection limit of the alpha activity concentration
8.7.2	Detection limit of the beta activity concentration
8.8	Confidence limits
9	Control of interferences
9.1	General
9.2	Relative humidity
9.3	Geometry of the deposit
9.4	Crosstalk
9.5	Gamma emitters
9.6	Low beta energy
9.7	Chlorides
9.8	Organic matter
9.9	Contamination
9.10	Losses of activity
9.11	Contribution of the natural radionuclides
9.12	Losses of activity
10	Test report
Annex A	(informative) Numerical applications

Page count: 20