

ISO 4722-2:2024-12 (E)

Water quality - Thorium 232 - Part 2: Test method using ICP-MS

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Symbols	2
5	Principle	3
6	Sampling and sample storage	5
7	Chemical reagents and apparatus	5
	7.1 General	5
	7.2 Chemical reagents	5
	7.3 Apparatus	5
8	Separation	6
9	Quality control	6
	9.1 General	6
	9.2 Variables that can influence the measurement	6
	9.3 Instrument verification	6
	9.4 Method verification	7
10	Expression of results	7
	10.1 Data analysis	7
	10.2 Background	8
	10.3 Internal standard	8
	10.4 Expression of results using ^{229}Th or ^{230}Th as a recovery tracer by ICP-MS	8
	10.4.1 Calculation of activity of tracer and mass of analyte	8
	10.4.2 Measurement bias	9
	10.4.3 Sample mass concentration	9
	10.5 Expression of results using ^{229}Th or ^{230}Th as a recovery tracer	9
	10.5.1 Calculation of activity of tracer and mass of analyte	9
	10.5.2 Chemical recovery	10
	10.5.3 Measurement bias	10
	10.5.4 Sample mass concentration of the analyte	11
	10.6 Limit of detection	11
	10.7 Limit of quantification	11
	10.8 Correcting for ^{232}Th contamination in the tracer	11
	10.9 Conversion of mass concentration to mass activity	12
	10.10 Conversion from mass to volume units	12
11	Test report	12
Annex A (informative) Chemical separation of thorium		14
Bibliography		17