

ISO 13160:2012-07 (E)

Water quality - Strontium 90 and strontium 89 - Test methods using liquid scintillation counting or proportional counting

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Symbols, definitions, and units	1
4	Principle	2
4.1	General	2
4.2	Chemical separation	2
4.3	Detection	3
5	Chemical reagents and equipment	3
6	Procedure	3
6.1	Test sample preparation	3
6.2	Chemical separation	3
6.3	Preparation of the source for test	5
6.4	Measurement	6
7	Expression of results	8
7.1	Determination of ⁹⁰Sr in equilibrium with ⁹⁰Y	8
7.2	Determination of ⁹⁰Sr by ingrowth of ⁹⁰Y	9
7.3	Determination of ⁹⁰Sr in presence of ⁸⁹Sr when ⁹⁰Sr is in equilibrium with ⁹⁰Y	11
7.4	Confidence limits	14
8	Quality control	14
9	Test report	15
Annex A (informative) Determination of ⁸⁹Sr and ⁹⁰Sr by precipitation and proportional counting ..		16
Annex B (informative) Determination of ⁸⁹Sr and ⁹⁰Sr by precipitation and liquid scintillation counting		
Annex C (informative) Determination of ⁹⁰Sr from its daughter product ⁹⁰Y at equilibrium by organic extraction and liquid scintillation counting		24
Annex D (informative) Determination of ⁹⁰Sr after ionic exchange separation by proportional counting		
Annex E (informative) Determination of ⁹⁰Sr after separation on a crown ether specific resin and liquid scintillation counting		29
Annex F (informative) Determination of ⁹⁰Sr from its daughter product ⁹⁰Y at equilibrium by organic extraction by proportional counting		31
Annex G (informative) Correction factor for purity control using proportional counting		35
Bibliography		38