DIN EN ISO 13165-1:2020-12 (E)

Water quality - Radium-226 - Part 1: Test method using liquid scintillation counting (ISO 1316 5-1:2013)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Symbols, definitions and units ... **6**

4 Principle ... **7**

5 Reagents and equipment ... **7**
5.1 Reagents ... 7
5.2 Equipment ... 8

6 Sampling ... **8**

7 Instrument set-up and calibration ... **9**
7.1 Preparation of calibration sources ... 9
7.2 Optimization of counting conditions ... 9
7.3 Detection efficiency ... 9
7.4 Blank sample preparation and measurement ... 10

8 Procedure ... **10**
8.1 Direct counting ... 10
8.2 Thermal preconcentration ... 10
8.3 Sample preparation ... 11
8.4 Sample measurement ... 11

9 Quality control ... **11**

10 Expression of results ... **11**
10.1 Calculation of massic activity ... 11
10.2 Standard uncertainty ... 11
10.3 Decision threshold ... 12
10.4 Detection limit ... 12
10.5 Confidence limits ... 13
10.6 Calculations using the activity concentration ... 13

11 Interference control ... **13**

12 Test report ... **14**

Annex A (informative) **Set-up parameters and validation data** ... **15**

Bibliography ... **18**