

# DIN EN ISO 9697:2020-12 (E)

## Water quality - Gross beta activity - Test method using thick source (ISO 9697:2018)

---

Contents	Page
European foreword .....	3
Foreword .....	4
Introduction .....	5
1 Scope .....	7
2 Normative references .....	7
3 Terms,definitions,symbolsandunits .....	8
4 Principle .....	9
5 Reagents and equipment .....	9
5.1 Reagents .....	9
5.2 Equipment .....	10
6 Procedure .....	10
6.1 Sampling .....	10
6.2 Pre-treatment .....	10
6.3 Concentration stage .....	11
6.4 Sulfation stage .....	11
6.5 Ignition stage .....	11
6.6 Source preparation .....	11
6.7 Measurement .....	12
6.8 Determination of counting background .....	12
6.9 Preparation of calibration sources .....	12
6.10 Sensitivity and bias .....	13
6.11 Optimization of the determination .....	13
7 Source control .....	13
7.1 Contamination check .....	13
7.2 Potential disequilibrium of radionuclides .....	13
8 Expression of results .....	13
8.1 Calculation of activity concentration .....	13
8.2 Standard uncertainty .....	14
8.3 Decision threshold .....	15
8.4 Detection limit .....	15
8.5 Confidence limits .....	15
9 Test report .....	16
Annex A (informative) Example of performance criteria .....	17
Bibliography .....	18