ISO 22017:2020 (E)

Water quality — Guidance for rapid radioactivity measurements in nuclear or radiological emergency situation

Contents

Foreword

Introduction

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Guidance on emergency measurement
 - 4.1 Objective of a specific rapid measurement
 - 4.2 Routine screening levels versus intervention levels
 - 4.3 Operational intervention levels (OILs) from EU, USA and IAEA
- 5 Rapid measurements
 - 5.1 Adaptation of the methods used
 - 5.2 Sampling
 - 5.3 Rapid test methods
 - 5.3.1 Pre-screening: Identification of most contaminated samples
 - 5.3.2 Selection of the analytical strategy
 - 5.3.3 Appropriate sample volumes and counting times related to intervention levels
 - 5.3.4 Gross-alpha and gross-beta determination and gamma spectrometry
 - 5.3.5 Specific separations for alpha emitters or pure beta emitters measurement
- 6 Laboratory management to perform rapid measurements
 - 6.1 Protection of laboratory staff
 - 6.2 Sample management
 - 6.3 Material and staff
 - 6.4 Quality management
 - 6.5 Expression of results and test report
- Annex A (informative) World Health Organization screening for radionuclides in drinking water
- Annex B (informative) Operational Intervention Levels (OILs) from EU, US and IAEA
- Annex C (informative) Overview of different types of rapid measurements during a nuclear or radiological emergency
- Annex D (informative) Example of a decision scheme for rapid measurements in the early phase

Page count: 20