

ISO 8690:2024-09 (E)

Measurement of radioactivity - Gamma ray and beta emitting radionuclides - Test method to assess the ease of decontamination of surface materials

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions and symbols	2
3.1	Terms and definitions	2
3.2	Symbols	3
4	Principle	4
5	Apparatus	4
5.1	Beakers	4
5.2	Radiation detector	4
5.3	Pipettes	5
5.4	Two polytetrafluoroethylene (PTFE) or quartz ampoules	5
5.5	Storage bottles	5
5.6	Mounting	5
5.7	Cage-stirrer apparatus	6
6	Contamination and decontamination agents	6
6.1	Contaminant solutions	6
6.1.1	Composition of contaminant solutions	6
6.1.2	Preparation of the contaminant solutions	6
6.1.3	Preparation of contaminant solution using neutron activation	7
6.1.4	Storage of the contaminant solution	7
6.2	Decontaminant solution	8
7	Test specimens	8
7.1	Preparation and preliminary testing	8
7.1.1	Resistance to cleaning solution	8
7.1.2	Test specimens of non-metallic materials	8
7.1.3	Test specimens of metallic materials	8
7.2	Number and dimensions	9
7.3	Conditioning and cleaning	9
8	Procedure	9
8.1	Determining the specific pulse rate of each contaminant solution	9
8.2	Contamination	10
8.3	Decontamination	12
8.4	Determining the residual pulse rate	13
9	Calculation of results and assessment of ease of decontamination	14
10	Test report	14
Annex A (informative)	Holder for contamination of test specimen	16

Annex B (normative) Cage-stirrer apparatus for decontamination	18
Annex C (informative) Formulae for preparation of the ^{137}Cs and ^{60}Co contaminant solutions	27
Annex D (informative) Calculations for the production of the contaminant solution using neutron activation	30
Annex E (informative) Example of a test report	32
Bibliography	34