

ISO 11929-2:2019 (E)

Determination of the characteristic limits (decision threshold, detection limit and limits of the coverage interval) for measurements of ionizing radiation — Fundamentals and application — Part 2: Advanced applications

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Quantities and symbols
5	Summary of procedures for evaluating and reporting uncertainty and characteristic limits
6	Evaluation of a measurement on the basis of ISO/IEC Guide 98-3-1
6.1	Introduction and decisions to be made
6.2	General aspects concerning the measurand and the model of evaluation
6.3	Establishing probability distributions for the input quantities
6.4	Propagating probability distributions
6.5	Evaluation of the primary measurement result
6.6	Standard uncertainty associated with the primary measurement result
7	PDF for an assumed true value of the measurand
8	Decision threshold, detection limit and assessments
8.1	Specifications
8.2	Decision threshold
8.3	Detection limit
8.4	Assessments
9	Limits of the coverage interval
9.1	General Aspects
9.2	The probabilistically symmetric coverage interval
9.3	The shortest coverage interval
10	The best estimate and its associated standard uncertainty
11	Documentation
Annex A	(normative) Measurements with low count numbers
Annex B	(informative) Explanatory notes
B.1	General aspects of counting measurements
B.2	Bayesian statistics in measurement and probability distributions
B.2.1	General Aspects
B.2.2	The ISO/IEC Guide 98-3-1 approach
B.2.3	The ISO/IEC Guide 98-3 approach
B.3	Limits of the coverage interval and best estimate
B.3.1	General aspects
B.3.2	The ISO/IEC Guide 98-3-1 approach
B.3.3	The ISO/IEC Guide 98-3 approach
B.4	Standard uncertainty as a function of an assumed true value of the measurand

- B.5** **Decision threshold and detection limit**
- B.6** **Assessment of the measurement method**

Page count: 40