Indian Standard

CAPABILITY OF DETECTION

PART 4   METHODOLOGY FOR COMPARING THE MINIMUM DETECTABLE VALUE WITH A GIVEN VALUE

1   Scope

This part of ISO 11843 deals with the assessment of the capability of detection of a measurement method without the assumptions in ISO 11843-2 of a linear calibration curve and certain relationships between the residual standard deviation and the value of the net state variable

NOTE   These assumptions are often doubtful for values of the net state variable close to zero.

Instead of estimating the minimum detectable value, this part of ISO 11843 provides

— a criterion for judging whether the minimum detectable value is less than a given level of the net state

— the basic experimental design for testing the conformity of this criterion.

For assessment of the capability of detection, for instance as part of the validation of a measurement method, it is often sufficient to confirm that the method has a minimum detectable value that is less than a given value.

2   Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3534-1, *Statistics — Vocabulary and symbols — Part 1: Probability and general statistical terms*

ISO 3534-2:— , *Statistics — Vocabulary and symbols — Part 2: Applied statistics*

ISO 3534-3:1999, *Statistics — Vocabulary and symbols — Part 3: Design of experiments*

ISO 5479:1997, *Statistical interpretation of data — Tests for departure from normal distribution*

ISO 5725-2:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

ISO 11095:1996, *Linear calibration using reference materials*

ISO 11843-1:1997, *Capability of detection — Part 1: Terms and definitions*

ISO Guide 30:1992, *Terms and definitions used in connection with reference materials*