

(PREVIEW)

Indian Standard

CAPABILITY OF DETECTION

PART 3 METHODOLOGY FOR DETERMINATION OF THE CRITICAL VALUE FOR THE RESPONSE VARIABLE WHEN NO CALIBRATION DATA ARE USED

1 Scope

This part of ISO 11843 gives a method of estimating the critical value of the response variable from the mean and standard deviation of repeated measurements of the reference state in certain situations (see 5.1) in which the value of the net state variable is zero, for all reasonable and foreseeable purposes. Hence, it can be decided whether values of the response variable in an actual state (or test sample) are above the range of values attributable to the reference state.

General procedures for determination of critical values of the response variable and the net state variable and of the minimum detectable value have been given in ISO 11843-2. Those procedures are applicable in situations in which there is relevant straight-line calibration and the residual standard deviation of the measured responses is either constant or is a linear function of the net state variable. The procedure given in this part of ISO 11843 for the determination of the critical value of the response variable only is recommended for situations in which no calibration data are used. The distribution of data is assumed to be normal or near-normal.

The procedure given in this part of ISO 11843 is recommended for situations in which it is difficult to obtain a large amount of the actual states although a large amount of the basic state can be prepared.

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: Statistical quality control*

ISO 3534-3, *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 11843-2:2000, *Capability of detection — Part 2: Methodology in the linear calibration case*

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