AS ISO 11843.1—2004
ISO 11843-1:1997 and
ISO 11843-1:1997/Cor.1:2003

AS ISO 11843.1—2004

Australian Standard™

Capability of detection

Part 1: Terms and definitions

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee QR-008, Quality Systems. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard is identical with, and has been reproduced from ISO 11843-1:1997 and ISO 11843-1:1997/Cor.1:2003, *Capability of detection,* Part 1: *Terms and definitions*, and its Corrigendum 1:2003. The Corrigendum appears following the source text. It specifies corrections to be made to Definition 11 and Table A1.

The objective of this Standard is to provide terms and definitions relating to the detection of a difference between an actual state of a system and its basic state.

This Standard is Part 1 of AS ISO 11843, *Capability of detection*, which, when published will comprise of the following parts:

Part 1: Terms and definitions (this Standard)

Part 2: Methodology in the linear calibration case

Part 3: Methodology for determination of the critical value for the response variable when no calibration data are used

Part 4: Methodology for comparing the minimum detectable value with a given value

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover

(b) In the source text 'this part of ISO 11843' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

(d) None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

(e) Any French text or figures should be ignored.

AUSTRALIAN STANDARD

Capability of detection —

Part 1:
Terms and definitions

Capacité de détection —

Partie 1:
Termes et définitions

Scope

This part of ISO 11843 specifies terms and definitions relating to the detection of a difference between an actual state of a system and its basic state.

The general concepts laid down in this part of ISO 11843, critical value of the response variable, critical value of the net state variable and minimum detectable value of the net state variable (see definitions Nos. 9 to 11), apply to various situations such as checking the existence of a certain substance in a material, the emission of energy from samples or plants, or the geometric change in static systems under distortion.

Critical values can be derived from an actual measurement series so as to assess the unknown states of systems included in the series, whereas the minimum detectable value of the net state variable as a characteristic of the measurement method serves for the selection of appropriate measurement processes. In order to characterize a measurement process, a laboratory or the measurement method, the minimum detectable value can be stated if appropriate data are available for each relevant level, i.e. a measurement series, a measurement process, a laboratory or a measurement method. The minimum detectable values may be different for a measurement series, a measurement process, a laboratory or the measurement method.

Domaine d'application

La présente partie de l'ISO 11843 prescrit les termes et définitions liées à la détection d'une différence entre l'état réel d'un système et son état de base.

Les concepts généraux exposés dans la présente partie de l'ISO 11843: valeur critique de la variable de réponse, valeur critique de la variable nette d'état et valeur minimale détectable de la variable nette d'état (voir définitions n° 9 à n° 11), s'appliquent à des situations variées telles que la vérification de l'existence d'une certaine substance dans un matériau, l'émission d'énergie par des échantillons ou des installations, ou le changement géométrique dans des systèmes statiques sous contraintes.

Les valeurs critiques peuvent être issues d'une série de mesures réelles afin d'estimer les états inconnus de systèmes contenus dans cette série, tandis que la valeur minimale détectable de la variable nette d'état en tant que caractéristique de la méthode de mesure sert à la sélection de processus de mesure appropriés. Pour caractériser un processus de mesure, un laboratoire ou la méthode de mesure, la valeur minimale détectable peut être établie si des données appropriées sont disponibles pour chaque niveau concerné, c'est-à-dire une série de mesures, un processus de mesure, un laboratoire ou une méthode de mesure. Les valeurs minimales détectables peuvent être différentes pour une série de mesures, un processus de mesure, un laboratoire ou la méthode de mesure.