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## **Guidance on the selection and usage of acceptance sampling systems for inspection of discrete items in lots —**

### **Part 3: Sampling by variables**

*Lignes directrices pour la sélection d'un système, d'un programme ou  
d'un plan d'échantillonnage pour acceptation pour le contrôle d'unités  
discrètes en lots —*

*Partie 3: Échantillonnage par variables*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 8550-3 was prepared by Technical Committee ISO/TC 69, *Applications of statistical methods*, Subcommittee SC 5, *Acceptance sampling*.

This first edition of ISO/TR 8550-3, together with ISO/TR 8550-1 and ISO/TR 8550-2, cancels and replaces ISO/TR 8550:1994.

ISO/TR 8550 consists of the following parts, under the general title *Guidance on the selection and usage of acceptance sampling systems for inspection of discrete items in lots*:

— *Part 1: Acceptance sampling*

— *Part 3: Sampling by variables*

The following part is under preparation:

— *Part 2: Sampling by attributes*

## Introduction

This part of ISO/TR 8550 gives guidance on the selection of an acceptance sampling system for inspection by variables. It does this principally by reviewing the available systems specified by various standards and showing ways in which these can be compared in order to assess their suitability for an intended application. It is assumed that the choice has already been made to use sampling by variables in preference to sampling by attributes.

A corresponding guidance document on the selection of a generic acceptance sampling system, scheme or plan for inspection by attributes is given in ISO/TR 8550-2.

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# Guidance on the selection and usage of acceptance sampling systems for inspection of discrete items in lots —

## Part 3: Sampling by variables

### 1 Scope

The guidance in this part of ISO/TR 8550 is confined to acceptance sampling of products that are supplied in lots and that can be classified as consisting of discrete items (i.e. discrete articles of product). Each item in a lot can be identified and segregated from the other items in the lot and has an equal chance of being included in the sample. Each item of product is countable and has specific characteristics that are measurable on a continuous scale. Each characteristic has, at least to a good approximation, a normal distribution or a distribution that can be transformed so that it closely resembles a normal distribution.

Standards on acceptance sampling by variables are applicable to a wide variety of inspection situations. These include, but are not limited to, the following:

- a) end items, such as complete products or sub-assemblies;
- b) components and raw materials;
- c) services;
- d) materials in process;
- e) supplies in storage;
- f) maintenance operations;
- g) data or records;
- h) administrative procedures.

Although this part of ISO/TR 8550 is written principally in terms of manufacture and production, it should be interpreted liberally as it is applicable to the selection of sampling systems, schemes and plans for all types of product and processes as defined in ISO 9000.

### 2 Normative references

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

ISO/TR 8550-1:2007, *Guidance on the selection and usage of acceptance sampling systems for inspection of discrete items in lots — Part 1: Acceptance sampling*