International Standard

ISO 2859-1

Third edition
2026-01

Sampling procedures for inspection by attributes —

Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

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Règles d'échantillonnage pour les contrôles par attributs —

Partie 1: Procédures d'échantillonnage pour les contrôles lot par lot, indexés d'après le niveau de qualité acceptable (NQA)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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This document was prepared by Technical Committee ISO/TC 69, *Applications of statistical methods*, Subcommittee SC 5, *Acceptance sampling*.

ISO 2859-1:2026

This third edition cancels and replaces the second edition (ISO 2859-1:1999), which has been technically revised. It also incorporates ISO 2859-1:1999/Amd.1:2011 and ISO 2859-1:1999/Cor.1:2001.

The main changes are as follows:

— a new procedure for switching from normal (or reduced inspection) to skip-lot sampling inspection has been added;

— guidance on the requirements for producer and product qualification for skip-lot sampling inspection has been added;

— guidance on the efficacy of implementing skip-lot sampling inspection and some methods of randomly selecting lots to inspect or skip has been added;

— the operating characteristic (OC) curves for each plan have been removed in favour of sharing methods to create an individual plan's OC curve and average sample number (ASN) curve, both of which are now included in Annex E.

It is highly recommended that this document be used together with ISO 2859-0:1995, which contains illustrative examples.

A list of all parts in the ISO 2859 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The objectives of the methods laid down in this document are to ensure that lots of acceptable quality have a high probability of acceptance and that the probability of not accepting inferior lots is as high as practicable. This is achieved by means of the switching rules which control the change from the initial normal inspection to tightened or reduced inspection and which provide the following:

a) An automatic protection to the consumer (by means of a switch to tightened inspection or discontinuation of sampling inspection) if a deterioration in quality (i.e. an increase in nonconformities) be detected.

b) An incentive (at the discretion of the responsible authority) to reduce inspection costs (either by means of a switch to a smaller sample size and/or to skip the inspection of randomly chosen lots) if consistently good quality be achieved.

In this document, the acceptance of a lot is implicitly determined from an estimate of the percentage of nonconforming items, or nonconformities per 100 items, in the process, based on a random sample of items from the lot.

This document is intended for application to a continuing series of lots of discrete products all supplied by one producer using one production process. If there are different producers or production processes, this document is applied to each one separately.

This document is intended for application to quality characteristics by either counting the number of nonconforming items in the sample (binomial distribution) or counting the number of nonconformities in a sample (Poisson distribution).

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The choice of the most suitable attributes plan requires experience, judgement, and some knowledge of both statistics and the product to be inspected. Clause 5 of this document is intended to help those responsible for specifying sampling plans in making this choice.

The basic definitions and notations are provided in Clause 3 and Clause 4. The operational rules are contained in Clause 5 through Clause 11. Clause 12 provides further information on the monitoring of inspection results and the underlying process. Clause 13 provides information on the application of fractional acceptance number plans. The purpose of these plans is to provide a consistent progression from plans with acceptance number zero and plans with acceptance number one. All the tables needed for the sampling procedures can be found in Clause 15.

Six annexes are provided. Annex A is for information only and illustrates an example where the sampling plan applied is non-constant. Annex B shows five different sampling strategies. Annex C specifies the procedures for random selection at the skip-lot frequency. Annex D provides a comparison between skip-lot and continuous sampling inspection in terms of average number of inspections, the producer's and the consumer's risks. Annex E details the construction of the operating characteristic (OC) and average sample number curves. Annex F specifies the principles and methodology for constructing attribute sampling plans.

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