



ISO 2859-1

**Sampling procedures for inspection
by attributes —**

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

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)

**Third edition
2026-01**



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	vi
Introduction	vii
1 Scope	1
1.1 Continuous inspection	1
1.2 Skip-lot inspection	2
2 Normative references	2
3 Terms, definitions and symbols	2
3.1 Terms and definitions	2
3.2 Symbols and abbreviations	10
4 Expression of nonconformity	11
4.1 General	11
4.2 Classification of nonconformities	11
5 Acceptance quality limit (AQL)	11
5.1 Use and application	11
5.2 Specifying AQLs	11
5.3 Preferred AQLs	12
6 Submission of product for sampling	12
6.1 Formation of lots	12
6.2 Presentation of lots	12
7 Acceptance and non-acceptance	12
7.1 Acceptability of lots	12
7.2 Disposition of non-acceptable lots	12
7.3 Nonconforming items	12
7.4 Classes of nonconformities or nonconforming items	12
7.5 Special reservation for critical classes of nonconformities	13
7.6 Resubmitted lots	13
8 Drawing of samples	13
8.1 Sample selection	13
8.1.1 General	13
8.1.2 Skip-lot	13
8.2 When to draw the samples	13
8.3 Double or multiple sampling	14
9 Normal, tightened, reduced and skip-lot sampling inspection	14
9.1 Start of inspection	14
9.2 Continuation of inspection	14
9.3 Switching rules and procedures	14
9.3.1 Normal to tightened	14
9.3.2 Tightened to normal	14
9.3.3 Normal to reduced	14
9.3.4 Reduced to normal	16
9.3.5 Skip-lot to normal	16
9.3.6 Reduced to skip-lot	16
9.4 Discontinuation of inspection	16
9.5 Skip-lot sampling inspection	16
9.5.1 General requirements	16
9.5.2 Producer and product qualification	17

This is a preview of ISO 2859-1:2026. [Click here to purchase the full version from the ANSI store.](#)

9.5.3	Quantification and disquantification	18
9.5.4	Responsibilities on producer qualification	19
10	Sampling plans.....	19
10.1	Inspection level.....	19
10.2	Sample size code letters	20
10.3	Obtaining a sampling plan	20
10.4	Types of sampling plans	21
11	Determination of acceptability	21
11.1	Inspection for nonconforming items	21
11.2	Single sampling plans (integer acceptance number).....	21
11.3	Double sampling plans.....	21
11.4	Multiple sampling plans	21
11.5	Inspection for nonconformities.....	22
12	Further information.....	22
12.1	Operating characteristic (OC) curves	22
12.2	Process average.....	22
12.3	Average outgoing quality (AOQ).....	22
12.4	Average outgoing quality limit (AOQL).....	22
12.5	Average sample size curves	22
12.6	Consumer's and producer's risks.....	23
12.6.1	Use of individual plans.....	23
12.6.2	Consumer's risk quality (CRQ) tables.....	23
12.6.3	Producer's risk (PR) tables	23
13	Fractional acceptance number plans for single sampling (optional).....	23
13.1	Application of fractional acceptance number plans.....	23
13.2	Acceptability determination	24
13.2.1	Inspection for nonconforming items	24
13.2.2	Inspection for number of nonconformities	25
13.3	Switching rules	25
13.3.1	Normal to tightened and tightened to normal	25
13.3.2	Normal to reduced.....	25
13.3.3	Reduced to normal inspection and discontinuation of inspection	25
13.3.4	Non-constant sampling plan	25
14	Inspection Errors	26
15	Sample size code letters	26
16	Tables of single sampling plans	27
17	Tables of double sampling plans.....	30
18	Tables of multiple sampling plans.....	33
19	Tables of producer's risk (PR)	42
20	Tables of consumer risk quality (CRQ)	45
21	Tables of average outgoing quality limits (AOQL)	48
22	Average sample size comparisons by acceptance number	50
23	Tables of single sampling fractional acceptance number plans	52
24	Normalized scheme operating characteristic curves	55
Annex A (informative)	Example for non-constant sampling plan	57
Annex B (informative)	Sampling strategies	58

This is a preview of ISO 2859-1:2026. [Click here to purchase the full version from the ANSI store.](#)

Annex C (normative) Procedures for random selection at the skip-lot sampling inspection frequency	60
Annex D (informative) Skip-lot sampling inspection.....	61
Annex E (informative) The construction of operating characteristic (OC) and average sample number (ASN) curves	66
Annex F (informative) The Construction of Sampling Plans	77
Bibliography	81

This is a preview of ISO 2859-1:2026. [Click here to purchase the full version from the ANSI store.](#)

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.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

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.

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).

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.