



GB/T 2828.1-2012

Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection(ISO 2859-1:1999, IDT)

计数抽样检验程序 第1部分：按接收质量
限 (AQL) 检索的逐批检验抽样计划

General Administration of Quality Supervision,
Inspection and Quarantine of the People's
Republic of China

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For further clarification and questions, please contact us:

chemical@chemlinked.com

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com



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Replacing GB/T 2828.1-2003

Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1:1999, IDT)

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ChemLinked Team, REACH24H Consulting Group| <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

Quarantine of the People's Republic of China
Standardization Administration of the People's Republic of China

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

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ChemLinked Team, REACH24H Consulting Group| <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

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Foreword

GB/T 2828 consists of the following parts, under the general title *Sampling procedures for inspection by attributes*:

- Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1:1999, IDT)
- Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection (ISO 2859-2:1985, NEQ)
- Part 3: Skip-lot sampling procedures (ISO 2859-3:2005, IDT)
- Part 4: Procedures for assessment of declared quality levels (ISO 2859-4:2002, MOD)
- Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-5:2005, IDT)
- Part 10: Introduction to the GB/T 2828 series of standards for sampling for inspection by attributes (ISO 2859-10:2006, MOD)
- Part 11: Procedures for assessment of declared quality levels for small population

This is Part 1 of GB/T 2828.

This part was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 2828.1-2003 “Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection”.

Compared with GB/T 2828.1-2003, the changes of technical contents in this part of GB/T 2828 mainly include:

- the terms, definitions, symbols have been modified according to GB/T 3358.2-2009. For example, the term “sampling characteristic curve” has been modified to “operating characteristic curve”; the explanation on the term “defect” has been modified from “The term ‘defect’ is applicable when a quality characteristic of a product or service is evaluated conventionally to “The term “defect” is appropriate for use when a quality characteristic of a product or service is evaluated in terms of usage (as contrasted to conformance to specifications)”;
- the curve chart $Ac = 4$ has been added in the average sample size curves for single, double and multiple sampling as Table 9;
- some literal expressions have been modified.

This part of GB/T 2828 is identical to the international standard ISO 2859-1:1999 “Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection” and the Technical Amendment to ISO 2859-1:1999 issued on 2001-03-01. At the same time, the following corrections made to ISO 2859-1:1999 in GB/T 2828.1-2003 have been retained:

- the arrow in the curve $Ac = 12$ in Table 9 has been deleted;
- the arrow position in the curve $Ac = 7$ in Table 9 has been moved from 3 to 3.15;
- the abscissas of the curves $AC = 27$, $AC = 30$, $AC = 41$ and $AC = 44$ in Table 9 have been modified to “ $n \times$ the number of nonconformities per 100 items/100”.

Please note that some content of this document may involve patent, the publisher of this document does not assume responsibility for identifying these patents.

This part of GB/T 2828 was proposed by China National Institute of Standardization.

This part of GB/T 2828 is under the jurisdiction of National Technical Committee of Standardization for Application of Statistical Methods (SAC/TC 21).

Drafting units of this part of GB/T 2828 are: China National Institute of Standardization, Ordnance Engineering College of the Chinese People's Liberation Army, Academy of Mathematics and Systems Science (AMSS) in the Chinese Academy of Sciences (CAS) and Center Testing International (Xiamen) Co., Ltd.

Main drafters of this part of GB/T 2828 are: Yu Zhenfan, Zhang Yuzhu, Ding Wenxing, Xiao Hui, Zhang Fan, Feng Shiyong, Ma Yilin, Liu Wen and Wan Feng.

This part of GB/T 2828 replaces all previous standards, those issued editions are:

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

——GB 2828-1981, GB/T 2828-1987 and GB/T 2828.1-2003.

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

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

1 Scope

1.1 This part of GB/T 2828 specifies an acceptance sampling system for inspection by attributes. It is indexed in terms of the acceptance quality limit (AQL).

Its purpose is to induce a supplier through the economic and psychological pressure of lot non-acceptance to maintain a process average at least as good as the specified acceptance quality limit, while at the same time providing an upper limit for the risk to the consumer of accepting the occasional poor lot. Sampling schemes designated in this part of GB/T 2828 are applicable, but not limited, to inspection of

- end items,
- components and raw materials,
- operations,
- materials in process,
- supplies in storage,
- maintenance operations,
- data or records, and
- administrative procedures.

1.2 The sampling schemes in this part of GB/T 2828 are intended primarily to be used for a continuing series of lots, that is, a series long enough to allow the switching rules (see 9.3) to be applied. These rules provide:

- a) a protection to the consumer (by means of a switch to tightened inspection or discontinuation of sampling inspection) should a deterioration in quality be detected;
- b) an incentive (at the discretion of the responsible authority) to reduce inspection costs (by means of a switch to reduced inspection) should consistently good quality be achieved.

Sampling plans in this part of GB/T 2828 may also be used for the inspection of lots in isolation but, in this case, the user is strongly advised to consult the operating characteristic curves (see 12.6) for sampling plans to find a plan that will yield the desired protection. In that case, the user is also referred to the sampling plans indexed by limiting quality (LQ) given in GB/T 2828.2-2008.

2 Normative References

The following documents are indispensable for the application of this document. For dated references, only the noted date edition of the normative document is applicable to this document. For undated references, the latest edition (including all the amendments hereof) of the normative document referred to applies.

GB/T 2828.2-2008 Sampling procedures for inspection by attributes - Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection (ISO 2859-2:1985, NEQ)

GB/T 2828.3-2008 Sampling procedures for inspection by attributes - Part 3: Skip-lot sampling procedures (ISO 2859-3:2005, IDT)

GB/T 3358.1-2009 Statistics - Vocabulary and symbols - Part 1: General statistical terms and terms used in probability (ISO 3534-1:2006, IDT)

GB/T 3358.2-2009 Statistics - Vocabulary and symbols - Part 2: Applied statistics (ISO 3534-2:2006, IDT)

3 Terms, Definitions and Symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 3358.1-2009 and GB/T 3358.2-2009 and the following apply.

3.1.1 Inspection

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

Activity such as measuring, examining, testing or gauging one or more characteristics of a product or service, and comparing the results with specified requirements in order to establish whether conformity is achieved for each characteristic

3.1.2 Original inspection

First inspection of a lot according to the provisions of this part of GB/T 2828

Note: This is to be distinguished from the inspection of a lot which has been resubmitted after previous non-acceptance.

3.1.3 Inspection by attributes

Inspection whereby either the item is classified simply as conforming or nonconforming with respect to a specified requirement or set of specified requirements, or the number of nonconformities in the item is counted.

Note: Inspection by attributes includes inspection for conformity of items as well as inspection for number of nonconformities per hundred items.

3.1.4 Item

That which can be individually described and considered

Examples:

- a physical item;
- a defined quantity of material;
- a service, an activity or a process;
- an organization or a person; or
- some combination thereof.

3.1.5 Nonconformity

Non-fulfillment of a specified requirement

Note 1: In some situations, specified requirements coincide with customer usage requirements (see defect, 3.1.6). In other situations, they may not coincide, being either more or less stringent, or the exact relationship between the two is not fully known or understood.

Note 2: Nonconformity will generally be classified according to its degree of seriousness such as:

- Class A: those nonconformities of a type considered to be of the highest concern; in acceptance sampling, such types of nonconformities will be assigned a very small acceptance quality limit (AQL) value;
- Class B: those nonconformities of a type considered to have the next lower degree of concern; therefore, these can be assigned a larger acceptance quality limit value than those in class A and smaller than in class C, if a third class (class C) exists, and so on for nonconformities of other types.

Note 3: Adding characteristics and classes of nonconformities will generally affect the overall probability of acceptance of the product.

Note 4: The number of classes, the assignment into a class, and the choice of acceptance quality limit for each class, should be appropriate to the quality requirements of the specific situation.

3.1.6 Defect

Non-fulfillment of an intended usage requirement

Note 1: The term “defect” is appropriate for use when a quality characteristic of a product or service is evaluated in terms of usage (as contrasted to conformance to specifications).

Note 2: It is important to distinguish between the concepts of defect and nonconformity. Since the term “defect” now has definite meaning within the law, especially relating to product liability concerns, it should be used with caution.

3.1.7 Nonconforming item

Item with one or more nonconformities

Note: Nonconforming items will generally be classified by their degree of seriousness such as:

- Class A: an item which contains one or more nonconformities of class A and may also contain nonconformities of class B and/or class C, etc.;
- Class B: an item which contains one or more nonconformities of class B and may also contain nonconformities of class C, etc. but contains no nonconformity of class A.

ChemLinked Team, REACH24H Consulting Group | <http://chemlinked.com>

14th Floor, Building 3, Haichuang Technology Center 1288 West Wen Yi Road, Hangzhou, China (311121)

Tel: +86 571 8609 4444 Fax: +86 571 8700 7566 Email: chemical@chemlinked.com

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Free Trial (14days)	√	√	x	√	3 Latest Ones	Download Disabled	x	x	Limited	x	Free Ones Only	x	x
Standard	√	√	√	√	√	√	√	√	√	√	√	√	x
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