

Translated English of Chinese Standard: GBT41725-2022

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 03.120.99

CCS A 00

GB/T 41725-2022

**General principles for setting limits of chemical substances
in consumer products**

消费品中化学物质限量制定导则

Issued on: October 12, 2022

Implemented on: October 12, 2022

**Issued by: State Administration for Market Regulation;
Standardization Administration of PRC.**

Table of Contents

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Basic process	6
5 Information collection	7
6 Determination of benchmark limits	9
7 Socio-economic analysis	10
8 Determination of comprehensive limits	12
References	13

General principles for setting limits of chemical substances in consumer products

1 Scope

This document gives the basic process for setting the limits of chemical substances in consumer products, and stipulates the collection of information, determination of benchmark limits, socio-economic analysis, determination of comprehensive limits, and other related content.

This document is applicable to standardize and guide various organizations to carry out activities related to the setting of chemical substance limits in consumer products.

2 Normative references

The following documents contain the provisions which, through normative reference in this document, constitute the essential provisions of this document. For the dated referenced documents, only the versions with the indicated dates are applicable to this document; for the undated referenced documents, only the latest version (including all the amendments) is applicable to this document.

GB/T 41007-2021 Consumer product safety - Guidelines for characterization and exposure assessment of chemical hazard

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 consumer products

The products that are designed and produced mainly (but not only) for personal use, including product components, parts, accessories, instructions for use, and packaging.

[Source: GB/T 35248-2017, 2.2]

3.2 safety limits

For the sake of the protection of human health, the restrictive values that are stipulated for chemical substances, which include concentration and time factors.

3.3 benchmark limits

When the chemical substance exposure is equal to the safety limit, the corresponding content of the chemical substance in the consumer product.

3.4 comprehensive limits

Under the constraint that the content of chemical substances in consumer products is lower than the benchmark limit, and the influencing factors such as economy, society and environment are comprehensively considered, the content of chemical substances in consumer products that maximizes the overall welfare of the society.

3.5 risk acceptance

A decision to accept a particular risk.

[Source: GB/T 23694-2013, 4.7.1.6]

3.6 socio-economic analysis; SEA

A method of analyzing all relevant effects (i.e., including both positive and negative changes) of one scenario relative to another.

Note: Relevant impacts include human health, environment, economy, society, and wider economic impacts.

[Source: GB/Z 24785-2009, 3.26, modified]

4 Basic process

4.1 Information collection

The information about the toxicities, functions, usage scenarios, and objects of use of chemical substances, as well as the production and use of chemical substances in the industrial chain, is collected.

4.2 Determination of benchmark limits

With reference to current regulations or standards, or with the methods of risk assessment, the benchmark limits of chemical substances in consumer products are determined.

4.3 Socio-economic analysis

With the socio-economic analysis method, the impact of different chemical substance limits on consumers, industrial chains, and other related parties is evaluated.

5.2 Collection of consumer-related information

The information on the objects of use, use scenarios, and accident cases of consumer products is collected, which includes the information on the users, user behavior, use environment, product characteristics, and injury outcomes. Information collection methods include but are not limited to:

- a) Carry out questionnaire surveys;
- b) Conduct behavioral observation experiments;
- c) Collect information on personal injuries caused by consumer products;
- d) Collect consumer complaint information;
- e) Collect domestic and foreign product recall information;
- f) Collect product inspection and testing information;
- g) Others.

5.3 Collection of information about the industry chain

The information on the production and use of chemical substances in the industrial chain is collected, which includes the level of chemical substances in consumer products, the equipment & process and inspection & control methods used for chemical substances in the production and manufacturing of consumer goods, the information on alternative chemical substances, as well as the information on costs of the chemical substances, competition between upstream and downstream enterprises in the industrial chain, competition among enterprises of the same type, etc. Information collection methods include but are not limited to:

- a) Inquire about relevant domestic and foreign laws, regulations, standards, and published literature;
- b) Query industry databases or statistical yearbooks;
- c) Carry out business research;
- d) Carry out questionnaire surveys;
- e) Carry out expert consultation;
- f) Carry out sampling and sample testing;
- g) Others.

6 Determination of benchmark limits

6.1 Refer to current regulations or standards

If the limits of chemical substances in the current regulations or standards are adopted as the benchmark limits of chemical substances in consumer products in which chemical substance limits are to be formulated, the following conditions shall be met.

- a) In the situation that the same chemical substance is used in different consumer products, when the object of use, method of use, and environment of use of the two consumer products are the same, the chemical substance limit specified in the current consumer product regulations or standards can be used as the benchmark limit of the chemical substance in the consumer product whose chemical substance limit is to be formulated.
- b) For different chemical substances in the same consumer product, only when the toxicity and harm mechanism of the different chemical substances are the same, the set chemical substance limit in the consumer product can be used as the benchmark limit of the chemical substance whose limit is to be formulated in the consumer product.
- c) Sufficient technical information is available to prove the scientific rationality of the chemical substance limits stipulated in current regulations or standards.

6.2 Methods based on risk assessment

6.2.1 Overview

The benchmark limit can be determined by the risk assessment method, and its main process includes the derivation of the safety limit, selection of the exposure model, determination of the values of the parameters in the model, and calculation of the benchmark limit.

6.2.2 Derivation of safety limits

Safety limits can be derived in two ways:

- a) Directly adopt the safety limits from the database of the authoritative chemical substance toxicity;
- b) Deduce safety limits from the toxicity data of chemical substances. For specific methods, refer to Appendix B in GB/T 41005-2021.

6.2.3 Selection of an exposure model and determination of the values of parameters in the model

- c) Consumer choices between chemical substance risks and consumer product prices;
- d) Other dimensions of consumer concern.

7.2 Industry Chain

Dimensions of the analysis of chemical substance limits' impacts on industries include but are not limited to:

- a) Production costs, including raw material costs (substitute materials), auxiliary material costs, equipment loss, energy costs, etc.;
- b) Investment costs in fixed assets, including new production lines and new factory buildings, etc.;
- c) R&D costs and patent fees, including equipment purchased for R&D purposes, costs incurred in hiring R&D personnel, and patent purchase fees, etc.;
- d) Testing and certification costs, including enterprise internal testing costs, product certification costs, supervision and testing costs, etc.;
- e) Environmental protection costs, including investment in enterprise environmental protection equipment and operating expenses, etc.;
- f) Other auxiliary production and operation costs, including management costs, procurement costs, transportation and storage costs, etc.;
- g) The impact of limit requirements on the functionality of consumer products;
- h) The ability of raw material suppliers to provide raw materials that meet the limit requirements;
- i) The impact of limit requirements on the short-run equilibrium of supply and demand;
- j) The matching degree between the limit requirements and the industrial technical level;
- k) Differences in tolerance of different enterprises in the industry, competition situation in the internal market of the industry, etc.

7.3 Other related parties

The analysis dimensions of chemical substance limit impacts on other relevant parties include but are not limited to the following content:

- a) The impact of limit requirements on employment;

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----