

ICS 67.040
CCS X 08



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 28843-2024

Replacing GB/T 28843-2012

**Management requirements for traceability in food cold chain
logistics**

食品冷链物流追溯管理要求

Issued on: May 28, 2024

Implemented on: September 1, 2024

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

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1 Scope

China's national management requirements for traceability in food cold chain logistics. It specifies the basic requirements for traceability management, the traceability information, the collection and recording of that information, the management of the information, and the requirements for implementing traceability. It applies to the traceability management of the cold chain logistics process for prepackaged food by cold chain logistics service providers. A cold chain fails silently. Food that has been warm and has been cooled again looks exactly like food that was never warm, and by the time the consequence appears - as spoilage, as a shortened shelf life, or as illness - the consignment has been split, delivered and consumed, and the excursion that caused it happened days earlier in a vehicle or a chamber that nobody was watching. Traceability is the only mechanism that recovers what happened, and it is the reason a temperature record is worth as much as the refrigeration itself. What this standard requires is that the record exists, that it is attached to the goods rather than to the equipment, and that it can be followed both ways: from a batch of product back to every temperature it experienced and every party that held it, and from a failure in a chamber forward to every consignment that was in it. That two-directional requirement is what makes a recall possible without withdrawing everything. The 2024 edition organises the requirements around the information rather than the process: what information must exist, how it is collected and recorded, how it is stored and shared between the parties in the chain, and how abnormal information is handled - the last being the clause that decides

whether an excursion is acted on or simply logged. An informative annex covers the measurement and sampling of food temperature, direct and indirect. Issued on 28 May 2024 and in force since 1 September 2024, it replaces GB/T 28843-2012.

This document specifies the basic requirements for traceability management of food cold chain logistics, traceability information, information collection and recording, traceability information management, and management requirements for implementing traceability. This document applies to the traceability management of the cold chain logistics process for prepackaged food by food cold chain logistics service providers (hereinafter referred to as "the provider").

2 Normative references

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

GB/T 18354, Logistics terminology

GB/T 22005, Traceability in the feed and food chain -- General principles and basic requirements for system design and implementation

GB/T 37029-2018, Food traceability -- Requirements for information recording

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 18354 as well as the followings apply.

3.1 prepackaged food Food that is prepackaged in fixed quantities or prepared in packaging materials or containers.

3.2 food cold chain logistics A logistics project that uses temperature control as the main means to ensure that food is kept within the required temperature and humidity range from the time it leaves the factory until it is sold. [Source: GB 31605-2020, 2.1]

3.3 traceability By recording and identifying, we can track and trace the history, application, or location of an object's activities. NOTE. Traceability includes tracking and tracing the source. [Source: GB/T 38155-2019, 2.2]

3.4 traceability system A set of interconnected or interacting elements that support the maintenance of products and their components throughout the supply chain or in parts of production and use, including information such as product history, application status, or location. [Source: GB/T 38155-2019, 2.9]

4 Basic requirements

4.1 The provider shall establish a traceability system and conduct regular verification or self-inspection of the traceability system within its business scope. The design and implementation of the traceability system shall comply with the provisions of GB/T 22005 and meet the requirements of the client (hereinafter referred to as "the client") entrusting the food cold chain logistics service.

4.2 The provider shall collect temperature information in the food cold chain logistics as the main traceability content. The collection and recording of temperature information shall be true, reliable and traceable throughout the process.

4.3 The provider shall establish and improve a comprehensive temperature monitoring management system and inter-stage handover procedures. Detailed temperature monitoring operation specifications shall be formulated. The requirements for temperature monitoring and recording of food at different logistics stages shall be clearly defined (including requirements for measuring equipment, selection of temperature measurement points, allowable temperature deviation range, monitoring methods, recording of monitoring results, etc.), as well as requirements for record retention methods and retention periods.

4.4 The provider shall provide business training and performance evaluation for information monitoring operators in accordance with the monitoring operation specifications and information collection and recording requirements.

4.5 The provider shall be equipped with continuous temperature monitoring measuring devices and data recording devices that cannot be manually altered, for monitoring and recording temperature information. The relevant measuring devices shall be metrologically verified and calibrated periodically.

4.6 The provider shall establish an information management system, formulate information storage operation specifications, clarify the information sharing mechanism, and formulate a plan for handling abnormal information.

5 Traceability information

Food cold chain logistics traceability information shall include the basic information in Table

1. Extended information from Table 1 may also be included.

6.1.1 Transportation

6.1.1.1 Before food shipment, traceability information shall be collected according to the following requirements.

- a) Verify the basic information of the food, see Table 1;
- b) Both parties jointly verify and confirm the temperature records from the previous stage of transportation;

c) Pre-cool the transport vehicle or container according to the food transportation temperature requirements. Measure the internal ambient temperature of the transport vehicle or container before transportation begins;

d) Measure the surface temperature of the outer packaging or inner packaging of the food. If the surface temperature exceeds the specified range, the core temperature of the food shall also be measured.

6.1.1.2 During transportation, the ambient temperature during transit shall be continuously monitored in real time and data shall be collected periodically. The time interval between data collection and recording shall not exceed 10 min.

6.1.1.3 The measurement of ambient temperature during transit shall be conducted at the location of the most unfavorable temperature condition on the transport vehicle or vehicle (such as air supply vents, air return vents, door openings, etc.). For transport vehicles or vehicles with multiple temperature zones, the ambient temperature of each temperature zone in the transport unit shall be collected separately.

6.1.1.4 If it is necessary to monitor the temperature of food during transportation, the temperature measurement method shall be determined in consultation with the client. If direct temperature measurement is adopted, the selection of measurement sampling points is as described in Annex A, A.1.1.

6.1.1.5 At the end of transportation, the temperature of the food at the time of handover shall be measured jointly with the personnel in the next stage, in accordance with the requirements of