



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

GB 14930.2-2025

Replacing GB 14930.2-2012

National food safety standard - Disinfectants

食品安全国家标准 消毒剂

Issued on: March 16, 2025

Implemented on: September 16, 2025

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

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1 Scope

The standard applies to disinfectants for food use, including detergent-disinfectants that also clean.

2 Terms and definitions

2.1 Disinfectant for food use - a preparation used to kill micro-organisms on food surfaces and on the surfaces in direct contact with food, such as tableware, drinking vessels, food tools, equipment, packaging materials and containers, so as to reach the required level of disinfection.

3 Basic requirements

3.1 Disinfectants for food use shall be used reasonably and under conditions meeting good food hygiene practice. Where they are used on food itself, their use is limited to the surface disinfection of fruit and vegetables eaten raw, except where Annex A provides otherwise.

3.2 Under the recommended conditions of use, the level of disinfectant migrating into or remaining in the food shall not harm human health, shall not change the composition, structure, colour, smell or taste of the food, and shall not mask spoilage of the food.

3.3 So far as the disinfecting effect allows, the quantity of disinfectant used and the contact time shall be kept as low and as short as possible, and the residue shall be reduced as far as possible by rinsing with water, draining or another effective method.

4 Technical requirements

4.1 Raw materials. The raw materials of disinfectants for food use shall meet Annex A,

Annex B and the related public notices, and shall meet the relevant national standards and provisions.

4.2 Sensory requirements, given in Table 1. Appearance: the product shall have the characteristics proper to its type; liquid products shall not separate into layers and shall be free of suspended matter and sediment; granular, powder and tablet products shall be uniform, free of foreign matter and free of caking. Smell: the smell proper to the type, without off-odour.

4.3 Physical and chemical indicators, given in Table 2. Total arsenic, expressed as As, in milligrams per kilogram: not more than 5 for products containing phosphate and not more than 3 for products free of phosphate, determined as in GB/T 30797. Heavy metals, expressed as Pb, in milligrams per kilogram: not more than 30, determined as in GB/T 30799.

4.4 Microbicidal indicators, given in Table 3 as killing log values, determined as in WS/T 10009. Escherichia coli (strain 8099): not less than 5.00 by the suspension method and 3.00 by the carrier method. Poliovirus (type I vaccine strain): not less than 4.00 by the suspension method and 3.00 by the carrier method; this line applies only to disinfectants for tableware and drinking vessels.

5 Other

5.1 The label and the instructions for use of a disinfectant for food use shall meet GB 38598.

5.2 The object to be disinfected shall be thoroughly washed or cleaned before disinfection. The field of use, the concentration of use, the contact time and the other conditions of use shall be such as to secure the disinfecting effect, and the label and instructions shall be followed strictly.

A Annex A Disinfection requirements for carcass surfaces at the poultry slaughtering stage

Sodium hypochlorite disinfectants and peracetic acid disinfectants containing peracetic acid, hydrogen peroxide, acetic acid and hydroxyethylidene diphosphonic acid may be used to disinfect the outer surface and the body cavity of poultry carcasses at the slaughtering stage, subject to the following.

a) The two disinfectants are allowed only in the chiller water at the poultry slaughtering stage; the concentration in the chiller water and the contact time shall be kept as low and as short as possible, and the chiller water shall be changed regularly and in good time so that it does not contaminate the carcasses.

b) Where a peracetic acid disinfectant containing peracetic acid, hydrogen peroxide, acetic

acid and hydroxyethylidene diphosphonic acid is used, the maximum concentrations in the chiller water are 2 000 mg/L for peracetic acid, 1 474 mg/L for hydrogen peroxide and 136 mg/L for hydroxyethylidene diphosphonic acid; the carcass may be immersed for disinfection once only, several continuous stages counting as one, and the immersion shall not exceed 60 min.

c) Where a sodium hypochlorite disinfectant is used, the free available chlorine concentration at the end of the make-up water line to the chiller shall not exceed 50 mg/L; the carcass may be immersed for disinfection once only, several continuous stages counting as one, and the immersion shall not exceed 60 min.

d) After the carcass surface has been disinfected, the residue of disinfectant shall be reduced as far as possible by rinsing or immersion in cooling water followed by draining, or by another effective method.

B Annex B List of raw materials (components) for food disinfectants and requirements for their use

B.1 Table B.1 lists the active components permitted in disinfectants for food use. Hydrated forms of the substances in Table B.1 are also allowed as active components.

B.2 Table B.2 lists the auxiliary components permitted in disinfectants for food use. Hydrated forms of the substances in Table B.2, and the sodium, potassium, calcium and ammonium salts of the acids, alcohols and phenols among them (acid salts and double salts included), are also allowed as auxiliary components.

B.3 Substances listed in GB 2760 and in GB 14930.1 are allowed as auxiliary components of disinfectants for food use; where a food additive is used as a disinfectant raw material it shall not exert a technical function on the food itself.

Table B.1 holds 59 numbered entries, each with its Chinese name and, where one exists, its CAS number. They include, among others, L-lactic acid (79-33-4), benzethonium chloride (121-54-0), ozone gas and ozone water, hypochlorous acid (7790-92-3), calcium hypochlorite (7778-54-3), sodium hypochlorite (7681-52-9), chlorhexidine acetate (56-95-1), potassium peroxydisulfate compound salt (70693-62-8), iodine (7553-56-2), sodium dichloroisocyanurate (2893-78-9), dioctyldimethylammonium chloride (5538-94-3), dibromocycanoacetamide (10222-01-2), chlorine dioxide (10049-04-4), potassium permanganate (7722-64-7), decanoic acid (334-48-5), hydrogen peroxide (7722-84-1), peracetic acid (79-21-0), polydimethyldiallylammonium chloride (26062-79-3), polyhexamethylene guanidine (31961-54-3), polyhexamethylene biguanide hydrochloride (32289-58-0), povidone iodine (25655-41-8), hexamethylenetetramine (100-97-0), chlorine (7782-50-5), chloramine T (127-65-1), trisodium chlorophosphate (56802-99-4 and 11084-85-8), citric acid (77-92-9), nonanoic acid (112-05-0), trichloroisocyanuric acid (87-90-1), domiphen bromide (538-71-6), benzalkonium chloride (8001-54-5 and

63449-41-2), benzalkonium bromide (91080-29-4), dodecyltrimethylammonium chloride (112-00-5), didecyltrimethylammonium chloride (7173-51-5), acidic oxidation potential water, slightly acidic electrolysed water, octanoic acid (124-07-2), bromine (7726-95-6), polyhexamethylene guanidine hydrochloride (57028-96-3), ethanol (64-17-5) and isopropanol (67-63-0). The list also carries several quaternary ammonium compounds identified by alkyl chain range, and the hydantoin derivatives dichlorohydantoin (118-52-5), dibromohydantoin (77-48-5) and bromochlorohydantoin (16079-88-2).

Two footnotes apply to Table B.1: ozone gas and ozone water, acidic oxidation potential water and slightly acidic electrolysed water are produced by a generator and may be used directly; chlorine dioxide and sodium hypochlorite may also be produced by a chlorine dioxide or sodium hypochlorite generator.

Table B.2 holds 24 numbered entries: 2,6-pyridinedicarboxylic acid (499-83-2), oxalic acid (144-62-7), boron nitride (10043-11-5), succinic acid (110-15-6), silica gel (112926-00-8), sulfuric acid (7664-93-9), cobalt sulfate (10124-43-3), magnesium sulfate (7487-88-9), sodium bisulfate (7681-38-1), sodium chloride (7647-14-5), sodium lignosulfonate (8061-51-6), urea (57-13-6), borax (1303-96-4), boric acid (10043-35-3), sodium metasilicate (6834-92-0), hydroxyethylidene diphosphonic acid (2809-21-4), sodium hydroxide (1310-73-2), sodium dodecylbenzene sulfonate (25155-30-0), sodium dodecyl sulfonate (2386-53-0), sodium dodecyl sulfate (151-21-3), pentadecylbenzenesulfonic acid (31169-63-8), carboxymethyl cellulose (9004-32-4), sodium octyl sulfonate (5324-84-5) and sodium bromide (7647-15-6).