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

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**Specification for small centralized water disinfection
(English Translation)**

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Foreword

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

This standard is formulated in accordance with the "Law of the People's Republic of China on the Prevention and Control of Infectious Diseases".

The organization responsible for drafting this standard. Jiangsu Provincial Health Inspection Institute.

Participated in the drafting of this standard. China Center for Disease Control and Prevention, Environmental and Health Related Product Safety Institute, Sichuan Provincial Center for Disease Control and Prevention heart.

1 Scope

This standard specifies the basic principles of disinfection, sanitation requirements, disinfection methods and effect evaluation for small-scale centralized water supply.

This standard applies to small centralized water supply.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB 320 Industrial synthetic hydrochloric acid GB/T 534 Sulfuric acid GB/T 1618 Industrial sodium chlorate GB 1987 Food additive citric acid GB 2721 Hygienic Standard for Table Salt GB 5749-2006 Sanitary Standard for Drinking Water GB/T 5750.11-2006 Standard Test Method for Drinking Water Disinfectant Index GB 28232-2011 Ozone generator safety and health standards GB 28233-2011 Safety and health standards for sodium hypochlorite generator GB 28235-2011 Safety and Hygiene Standard for Ultraviolet Air Sterilizer HG 3250 industrial sodium chlorite Technical Specifications for Hygienic Quality of Bleaching Powder and Bleaching Powder Essence Disinfectants (Trial) (2010 Edition) Ministry of Health Sanitation Safety Evaluation Specification for Drinking Water Disinfectants and Disinfection Equipment (Trial) (2005 Edition) Ministry of Health Disinfection technical specifications (2002 edition) Ministry of Health

3 Terms and definitions

The following terms and definitions apply to this document.

Water treatment facility Composed of coagulation sedimentation tank, filter tank, clean water tank and disinfection equipment, used for small-scale centralized water supply water quality treatment to ensure normal water supply the facilities.

Disinfection

Kill or remove pathogenic microorganisms on the media to make them harmless.

Disinfection methods include chlorine dioxide disinfectant generators, Ultraviolet disinfection device, ozone generator, sodium hypochlorite generator and calcium hypochlorite disinfectant are disinfected.

Disinfectant

A preparation used to kill microorganisms on the media to achieve disinfection or sterilization requirements. Including disinfectants in disinfection products and related beverages Disinfectant in water sanitary safety products.

Disinfection apparatus it has a disinfectant effect, used to kill or remove pathogenic microorganisms on the transmission vector, cut off the transmission route of infectious diseases, prevent and control A device or equipment for the occurrence and prevalence of infectious diseases. Including disinfection equipment in disinfection products and disinfection in products involving drinking water hygiene and safety Poisonous equipment.

Chlorine dioxide disinfectant generator Equipment that uses reaction raw materials to undergo a chemical reaction or whose main product is chlorine dioxide and used for disinfection, including chemical pure chlorine dioxide disinfection Generator, electrolytic chlorine dioxide disinfectant generator and chemical chlorine dioxide and chlorine mixed disinfectant with gas-liquid separation device Device.

Automatic feeder

A device with automatic dissolution, automatic dosing and metering functions.

4.1 Basic principles of disinfection

4.1.1

The water quality of the water source to be disinfected should meet the requirements of Chapter 5 in GB 5749-2006.

4.1.2

Water treatment facilities include coagulation sedimentation tanks, filter tanks, clean water tanks and disinfection equipment. In addition to ensuring the water treatment facilities required for disinfection Adjust other facilities according to the water quality of the water source.

4.1.3

Quality management should be strengthened for water treatment facilities, maintenance systems and operating procedures should be established, and regular cleaning and disinfection should be carried out.

4.1.4

Small-scale centralized water supply should be disinfected. The disinfection method should be safe and effective. Production equipment and containers should be corrosion-resistant.

Non-toxic and non-irritating to operators.

4.1.5

Among the raw materials used, sodium chlorite should meet the requirements of GB/T 1618, sodium chlorite should meet the requirements of HG 3250, and sodium chloride should Meet the requirements of GB 2721. Hydrochloric acid should meet the requirements of GB 320, sulfuric acid should meet the requirements of GB/T 534, and citric acid should meet the requirements of GB 1987 Requirement; sodium bisulfate should be food grade, purity should be $\geq 98\%$. The raw materials of calcium hypochlorite disinfectant should not contain ingredients such as washing and decontamination.

4.1.6

The disinfectant and disinfection equipment used should comply with relevant national

standards, norms and regulations, and should not pollute drinking water.

There are monitoring records and kept for future reference.

4.1.7

After disinfection, the microbiological indicators, disinfectant balance, disinfection by-products and other water quality indicators of the factory water shall comply with GB 5749-2006 Requirements in 4.1.7.

4.1.8

The storage room of disinfectants and raw materials should be strictly prohibited from smoking, keep the room dry, cool and ventilated. Do a good job of storage, raw materials can not be mixed be careful when placing, handling or moving.

4.2 Requirements for effect evaluation

4.2.1

Before the replacement of disinfection methods, before the new (reconstruction, expansion) small centralized water supply unit water supply, when microbial water pollution incidents occur, in the event of an infectious disease or natural disaster emergency, when the disinfection equipment has been continuously stopped for more than half a year, the laboratory disinfection effect should be evaluated and Health and safety evaluation.

4.2.2

The frequency of free residual chlorine and residual chlorine dioxide inspection is once a day, and the intensity of ultraviolet radiation and the residual ozone can be tested regularly.

4.3 Hygienic requirements for personnel directly engaged in disinfection operations

4.3.1

It shall be trained in drinking water and disinfection related laws and regulations, obtain a certificate of hygiene knowledge training, and master the disinfection operation procedures.

4.3.2

Obtain a health certificate. Suffering from active tuberculosis, viral hepatitis A, viral hepatitis E, enteric infectious disease, chemical Persons with purulent or chronic exudative skin diseases and hand fungal infections should not engage in disinfection operations until they are cured.

5.1.1 Installation and operation requirements