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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 27953-2020

Replacing GB 27953-2011

General requirements on disinfectant for infectious focus

疫源地消毒剂通用要求

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Foreword

All the technical contents in this Standard are mandatory. This Standard was drafted as per the rules specified in GB/T 1.1-2009. This Standard replaced GB 27953-2011 Hygienic Requirements of Disinfectant for Infectious Focus. Compared with GB 29753-2011, this Standard has the major technical changes as follows:

--- Add the normative references (see Clause 2 of this Edition);

--- Add terms and definitions of "concurrent disinfection", "terminal disinfection" (see Clause 3 of this Edition);

--- Add requirements of raw materials (see Clause 4 of this Edition);

--- Add the range of killing pathogenic microorganisms (see 7.1.1.1, 7.1.1.3, 7.1.1.4, 7.1.1.5,

7.1.1.6 of this Edition);

--- Add the selection requirements for disinfectants for contaminants of pathogens of blood-borne infectious disease and special infectious disease (7.1.1.5,

7.1.1.6 of this Edition);

--- Include the label instruction manual requirements and precautions into Clause 8; modify the precautions (see 8.1,

8.2 of this Edition);

--- Delete Appendix A; modify the dosage of the disinfectant; after adding the treatment method of the prion contaminant, include it into the text (see

7.2 of this Edition; Appendix A of 2011 Edition);

--- Delete the disinfection contents of drinking water, fruits and vegetables, hands and skin (see 5.2.3, 5.2.4,

5.2.6 of 2011 Edition). This Standard was proposed by and under the jurisdiction of National Health Commission of PRC. Drafting organizations of this Standard: Hebei Provincial Center for Disease Control and Prevention; National Institute of Environmental Health, China CDC; the PLA Center for Disease Control and Prevention; Jiangsu Provincial Health Supervision Institute; Shandong Center for Disease Control and Prevention; Shanghai Municipal Center for Disease Control & Prevention; and Zhejiang Provincial Center for Disease Control and Prevention. Chief Drafting staffs of this Standard: Chen Suliang, Han Yanshu, Zhang Liubo, Sun Yinqi, Ban Haiqun, Cui Yujie, Sun Keqin, Wang Qian, Zhang Haixia, Wang Jinyan, Yao Chushui, Li Xinwu, Gu Jian, Cui Shuyu, Zhu Renyi, Hu Guoqing, and Sun Huihui. The historical edition replaced by this Standard is as follows:

1 Scope

GB 27953-2020 is the Chinese national standard on general requirements on disinfectant for infectious focus, in the field of health care technology. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 9 April 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 November 2020. Classification: ICS 11.080, CCS C50. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard specifies the raw material requirements, technical requirements, inspection methods, use methods, labels and instruction manual for disinfectants used for disinfection of epidemic disease of infectious focus. This Standard applies to disinfectants that disinfect the epidemic source of infectious diseases or the environment contaminated by infectious pathogens.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB 19193 General Principle on Disinfection for Infectious Focus WS/T 367 Regulation of Disinfection Technique in Healthcare Settings Technical Standard for Disinfection (2002 Edition) [Ministry of Health (WFJF [2002] No.282)] Hygienic Standard for Factories Producing Disinfectants (2009 Edition) [Ministry of Health (WJDF [2009] No.53)]

3 Terms and Definitions

For the purpose of this Document, the following terms and definitions apply.

3.1 Infectious focus The place where the source of infection exists or existed; or the scope of the source of infection may spread the pathogen.

3.2 Disinfection for infectious focus Disinfection (2002 Edition), national standards and related regulations. After taking effective protective measures, it shall not cause harm to users' health.

6 Inspection Methods

6.1 Physical and chemical indicators It shall be tested according to the method specified in Technical Standard for Disinfection (2002 Edition) and/or relevant standard.

6.2 Killing microorganism effect It shall be tested according to the method specified in Technical Standard for Disinfection (2002 Edition) and/or relevant standard. The test methods for the target microorganism of the infectious disease can refer to the relevant standards or test technical specifications.

6.3 Toxicology test It shall be tested according to the method specified in Technical Standard for Disinfection (2002 Edition) and/or relevant standard.

7.1 Selection of commonly-used disinfectant

7.1.1 Determine the commonly used disinfectants according to the types and resistance of contaminated pathogens

7.1.1.1 Prion contaminants: select chlorine disinfectant or sodium hydroxide, combined with pressure steam for sterilization method.

7.1.1.2 Spore contaminants (such as Bacillus anthracis, Clostridium tetani, etc.): Select disinfectants containing chlorine, peroxides, bromine and formaldehyde, etc.

7.1.1.3 Mycobacteria (such as Mycobacterium tuberculosis, Mycobacterium leprae), hydrophilic viruses (such as poliovirus, norovirus, adenovirus, rotavirus, hepatitis A virus, hepatitis E virus and pathogens that cause hand, foot and mouth disease), mycoplasma, chlamydia, rickettsiae and other pathogen contaminants: Select disinfectants containing chlorine, bromine, peroxides, aldehydes and iodine, etc.

7.1.1.4 Bacterial propagules (such as Vibrio cholerae, Shigella shigae, Corynebacterium

diphtheriae, Salmonella typhi and Paratyphoid, Brucella, Neisseria gonorrhoeae, etc.), Nonlipid-coated viruses (such as influenza virus, measles virus, Hantavirus, etc.) and the contaminants of pathogens such as spirochetes: select disinfectants containing chlorine, bromine, peroxides, aldehydes, iodine, alcohols, guanidines, quaternary ammonium salts, etc.

7.1.1.5 For contaminants of pathogens (such as hepatitis B virus, hepatitis C virus, hepatitis D virus, human immunodeficiency virus, etc.) that are susceptible to organic matter and cause serious diseases, high-level disinfectants shall be used, such as disinfectants containing chlorine, bromine and peroxide, etc.

7.1.1.6 For contaminants of pathogens of special infectious diseases (such as SARS-Coronavirus, MERS-Coronavirus, Ebola virus, highly pathogenic avian influenza virus, H7N9 avian influenza virus, Yersinia pestis and rabies virus), it shall be carried out according to the relevant guideline formulated by the country.

7.1.1.7 For contaminants of unidentified pathogens, determine the applicable disinfectant according to 7.1.1.2.

7.1.2 Commonly-used disinfectants determined according to the disinfection objects contaminated by pathogens

7.1.2.1 Commonly-used surface disinfectants: chlorine-containing, bromine-containing and peroxide disinfectants, etc.

7.1.2.2 Commonly-used air disinfectants: peroxide disinfectants (such as peracetic acid, chlorine dioxide, hydrogen peroxide, ozone, etc.).

7.1.2.3 Commonly-used sewage disinfectants: chlorine-containing, bromine- containing and peroxide disinfectants, etc.

7.1.2.4 Commonly-used disinfectants for tableware: chlorine-containing, bromine-containing and peroxide disinfectants, etc.

7.1.2.5 Commonly-used disinfectants for excreta, secretions and corpse: chlorine-containing and peroxide disinfectants.

7.2 Use methods of commonly-used disinfectants

7.2.1 Disinfection methods used by prion disinfectants Table 1 -- Applicable Objects, Dosage and Use Method of Chlorine-Containing Disinfectants Disinfection objects Spore contaminants Mycobacterium and hydrophilic virus contaminants Contaminants of bacterial propagules and nonlipid-coated virus Use method Dosage Use method Dosage Use method Dosage Environment surface Rubbing, immersing, spraying 10000mg/L~15000mg/L available chlorine; acting for 2h; dosage of 100mL/m2 ~ 300mL/m

2 Rubbing, immersing, spraying 1000mg/L~2000mg/L available chlorine; acting for 1h;