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

WS/T 689-2020

**Operating Regulations for Vector Biological Control
(English Translation)**

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Foreword

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

Drafting organizations of this standard. Jiangsu Provincial Center for Disease Control and Prevention, Beijing Municipal Center for Disease Control and Prevention, Yangzhou University, Zhenjiang Center for Disease Control and Prevention.

1 Scope

This standard specifies the principles and operating procedures for the prevention and control of vector organisms in shopping malls and supermarkets.

This standard applies to the prevention and control of rodents, cockroaches, flies, and mosquitoes, which are the main vector organisms in supermarkets.

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/T 23795 Monitoring method for vector density of cockroaches GB/T 23796 Vector density monitoring method flies GB/T 23797 Vector density monitoring method for

mosquitoes GB/T 23798 Vector density monitoring method Rodent GB/T 27770 Vector density control level rodents GB/T 27771 Vector density control level mosquitoes GB/T 27772 Vector density control level flies GB/T 27773 Vector density control level cockroach GB/T 27777 Guidelines for the Safe Use of Rodenticides Anticoagulants GB/T 31714 Vector Biochemical Control Technology Guide Space Spray GB/T 31715 Technical Guidelines for Vector Biochemical Control GB/T 31718 Technical Specification for Integrated Vector Management, Chemical Control of Flies GB/T 31719 Technical Specifications for Comprehensive Management of Vector Organisms Chemical Control of Cockroaches GB/T 31721-2015 Vector control terminology and classification

3 Terms and definitions

The following terms and definitions apply to this document.

Vector

Organisms that can transmit pathogenic organisms from the source of infection or the environment to humans through biological and/or mechanical means.

Note 1: The vector organisms involved in this standard are mosquitoes, flies, cockroaches and rodents.

Note 2: Rewrite GB/T 31721-2015, definition 2.1.1.

Shopping mall and supermarket in an adjoining building group or a large building, a management agency organizes, coordinates, and plans to put a series of retailers Stores and service organizations combine elements to form different retail formats, providing consumers with shopping, catering, culture, leisure, entertainment and other services.

Rodent-proof structure or facilities A device that can prevent rodents from entering indoors or related places.

[GB/T 31721-2015, definition 4.4.3] 3.4 Housefly-proof facilities A device that can prevent flies from entering the room or touching food. Such as screen doors, screen windows, air curtain machines, door curtains, screen covers, etc.

[GB/T 31721-2015, definition 4.4.2] 3.5 Mosquito-proof facilities A device to prevent mosquitoes from entering the environment where people live or move, and to prevent mosquitoes from breeding and breeding and people from being bitten or harassed.

[GB/T 31721-2015, definition 4.4.1]

4 Principles of Prevention

According to the environment characteristics of shopping malls and supermarkets such as dense passenger flow and complex building structures, safe, environmentally friendly, simple and easy to operate methods are selected, Mainly to clear breeding habitats,

establish anti-rodent and anti-fly facilities, supplemented by physical and biological control, and implement localization when necessary Comprehensive measures to learn prevention and control, effectively control the hazards of disease vectors.

5.1.1 Investigation method

5.1.1.1

The rodent density survey shall be conducted according to the rat trace method in GB/T 23798; the survey of rodent prevention facilities shall be conducted according to the appendix in GB/T 27770-2011 A proceed.

5.1.1.2

The cockroach density survey is carried out according to the visual method in GB/T 23795.

5.1.1.3

The indoor adult flies and larvae breeding situation investigation is carried out according to the visual method in GB/T 23796, and the external environment adult flies investigation is carried out according to GB/T the cage trap method in 23796 is carried out; the survey of fly prevention facilities is carried out in accordance with 4.2 of GB/T 27772-2011.

5.1.1.4

The density survey of mosquito larvae is carried out according to the larval straw method in GB/T 23797; the density survey of adult mosquitoes is carried out according to GB/T 23797 Enticed to stop and proceed.

5.1.2 Survey content and indicators

Investigate the hazards of rodents, cockroaches, flies and mosquitoes indoor and outdoor in shopping malls and supermarkets, and use 15 m² as a standard for the indoor survey area the room is converted into the number of inspection rooms, and an independent room less than 15 m² is regarded as a standard room. The survey content and indicators are as follows.

a) The positive rate of rodent traces, the path index and the qualified rate of rodent prevention facilities in the rodent survey, and the survey results are filled in the rodent density survey form in the supermarket (see Appendix A).

1) Check the number of positive rooms with rat feces, rat holes, rat passages, rodent marks, and paw prints in the supermarket, and calculate the positive rate of rat tracks according to GB/T 23798;

2) The external environment walks along selected routes such as fences, both sides of roads, green belts, buildings and toilets, and garbage temporary storage.

Record the walking distance and the number of rat tracks found, and calculate the path

index according to GB/T 23798;

3) Check the qualification of rodent prevention facilities such as rodent barriers and rodent fences, and calculate the qualification rate of rodent prevention facilities according to GB/T 27770.

b) Cockroach investigation adult (nymph) infestation rate, live egg sheath infestation rate and cockroach trail positive rate, and the survey results are filled in the cockroach density survey form in supermarkets (see Appendix B).

Check the places where cockroaches inhabit in the shopping malls and supermarkets, and record the findings of adult (nymph), live egg sheaths, and cockroach traces (nymphs).

The number of positive rooms for cockroaches, corpses, empty egg sheaths, feces, etc.) is calculated as (nymph) infestation rate according to GB/T 23795.

Live egg sheath infestation rate, cockroach trace positive rate.

c) Flies survey adult flies infestation rate, flies larval breeding rate, flies prevention facility qualification rate and flies density, and the survey results are filled in the supermarket Fly density survey form (see Appendix C).

1) Check the places where flies are breeding and inhabiting activities inside and outside the supermarket, and record the number of positive rooms with flies in the room, the number of indoor and outdoor flies breeding places and the number of positive breeding places are calculated according to GB/T 23796 and the adult fly infestation rate is calculated according to GB/T

23796 Calculate the breeding rate of fly larvae;

2) Check the facilities that can prevent flies from entering the room or contacting food, such as screen doors, screen windows, air curtains, door curtains, screen covers, etc.

Calculate the pass rate of anti-fly facilities according to GB/T 27772;

3) The outdoor cage trap method is used to investigate the density of flies and calculate the density of flies according to GB/T 23796.

d) Mosquito survey container index and landing index, the survey results are filled in the mosquito density survey form in supermarkets (see Appendix D).

1) Check all kinds of water containers inside and outside the supermarket, record the number of checked containers and the number of positive water containers, according to GB/T 23797 calculates the container index;

2) Outdoor check and record the number of adult mosquitoes that stopped within 30 minutes, and calculate the stopping index according to GB/T 23797.