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

GB/T 43162-2023

Detection and identification of *Rhagoletis cerasi* (Linnaeus)

欧洲樱桃绕实蝇检疫鉴定方法

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Foreword

This document is prepared in accordance with GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Provisions are drafted.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed and coordinated by the National Technical Committee for Phytosanitary Standardization (SAC/TC271). This document was drafted by: Manzhouli Customs of the People's Republic of China, China Academy of Inspection and Quarantine, Alashan of the People's Republic of China Export Customs, Xi'an Customs of the People's Republic of China, Harbin Customs of the People's Republic of China, Guangzhou Customs of the People's Republic of China, Heguo Erlan Customs and Hohhot Customs of the People's Republic of China. The main drafters of this document. Liu Weiqi, Chen Chao, Jiang Fan, Zhao Wenjun, Li Lan, Liang Liang, Geng Jundong, Zheng Min, Liu Zhongmei, Liang Fan, Zhang Yonghong, Zhang Hongmei, Peng Fei, Ma Ling, Liu Zhenwei, Wang Yan, Yang Yuqi, Liu Wenmin, Chen Bosen, Chen Shuhua, Wang Xu. Quarantine and identification method of fruit fly in European cherry

1 Scope

GB/T 43162-2023 gives the detection and identification method for *Rhagoletis cerasi*, the European cherry fruit fly. It is the principal quarantine pest of cherries in Europe and is

absent from China, which imports cherries in very large and growing volume; a single infested consignment establishing the fly in Shandong or Liaoning would put the domestic crop under permanent chemical control. The larva is inside the fruit and invisible from outside, so identification rests on morphology of the adult and puparium and on molecular confirmation. The standard sets the basic information on the species, the principle of the method, the equipment and reagents, the on-site quarantine inspection, the laboratory identification, the interpretation of the result, the storage of specimens and the recording and retention of data, with informative annexes on the biology, the damage, and conventional and real-time PCR detection. It took effect on 1 April 2024.

This document applies to the quarantine and identification of European cherry fruit fly in plants and plant products.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document. SN/T 1383-2004 Apple fruit fly quarantine and identification method SN/T 1847-2006 Taxonomic terminology of oligochaete fruit fly pests

3 Terms and definitions

The terms and definitions defined in SN/T 1383-2004 and SN/T 1847-2006 apply to this document.

4. Basic information about the European cherry fruit fly

ripes(Rohdendorf,1961),Rhagoletisobsoleta(Hering,1936),Tephritisceraci(Persson,1958), Trypetasignata (Meigen,1826),Urophora cerasorum (Dufour,1845),Urophoraliturata Other Chinese names. European cherry fruit fly, cherry fruit fly Classification status. Diptera, Tephritidae, Rhagoletis Transmission route. Adults have certain flight capabilities and can be transmitted at short distances; adults, larvae, and eggs travel with host fruits and transportation tools, etc. Spread over long distances; mature larvae and pupae can spread over long distances along with soil, media, etc. See Appendix A for additional information on the European cherry fruit fly.

5 Method Principles

According to the damage symptoms of European cherry fruit fly, fruits suspected to be damaged by European cherry fruit fly were found at the quarantine site, and eggs, larvae and pupae were obtained. or adult samples. The eggs, larvae or pupae need to be raised to adults and then made into pin specimens, which can be observed under a

stereomicroscope. According to the morphology of the adult Characteristics are used to identify the species; when the conditions for adult samples are not available and there are samples such as larvae, eggs, pupae or partial tissues, European cherry can be used to wrap the seeds Conventional PCR detection method and real-time fluorescence PCR detection method of fly-specific amplification primers were used for species identification.

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