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

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**Identification of *Phytophthora cryptogea* Pethybridge and
Lafferty**

隐地疫霉菌检疫鉴定方法

(English Translation)

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Foreword

Appendix A, Appendix B, Appendix C and Appendix D of this standard are informative annexes.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Zhuhai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

1 Scope

This standard stipulates the quarantine and identification methods of *Phytophthora infestans* in entry and exit plant quarantine.

This standard is applicable to the quarantine and identification of *Phytophthora infestans* in inbound and outbound plants and medium soils.

2.2 Quarantine principle

The host plant of *Phytophthora sinensis* is very wide, and it is harmful to hundreds of economic crops. It is gerbera, aster, carnation, Christmas flower, tomato and other plants.

Important pathogens (see Appendix A). Mainly with strong anti-reverse oospores in the medium soil and host residues in winter and long-term survival, when the field temperature and humidity are appropriate, the oospores break the dormant germination and produce sporangia. Sporangia soon after rain or after irrigation the release of a large number of zoospores, eventually invading the host through the roots or wounds, can cause roots and stems to rot, causing the plants to be infested after infection Wilted and died.

2.3 Identification basis

The symptoms of the *Phytophthora infestans* on the host plant, the morphological characteristics of the pathogen, and the biological characteristics are the basis for identifying the bacteria.

3.1 Equipment

Biological microscope, stereo microscope, autoclave, dry heat sterilizer, ordinary balance, analytical balance, ultra-clean workbench, biological incubator.

3.2 Laboratory equipment

Alcohol lamps, medical scissors, tweezers, beakers, petri dishes, slides, coverslips, flasks, measuring cylinders, straws, jars.

4 Reagents

Ampicillin, pentachloronitrobenzene (PCNB), sodium hypochlorite (NaClO), benomyl, carbendazim (carbendazim), calcium nitrate $[\text{Ca}(\text{NO}_3)_2]$, potassium dihydrogen phosphate (KH_2PO_4), magnesium nitrate $[\text{Mg}(\text{NO}_3)_2]$, calcium chloride (CaCl_2), Rampampicin, calcium carbonate (CaCO_3), ethanol.

5.1 Basic medium

It is used for observation and measurement of preservation and culture traits of *Phytophthora sinensis*.

Use carrot medium (CA), V8 medium (V8A) or lima bean medium (LBA), the preparation method and steps are shown in section B. Chapter 1.

5.2 Selective medium

It is used for the germination of zoospores and the isolation and purification of pathogenic bacteria.

When 1000 mL of basal medium is routinely sterilized and cooled to about 55 ° C, the following antibiotics (all active ingredients) are added. Penicillium 50mg, rifampicin 20mg, carbendazim 25mg, pentachloronitrobenzene 25mg, shake well, made into a plate.

In the absence of pentachloronitrobenzene, the same amount of benzoate can be used instead.