

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

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**Methods for the quarantine and identification of south american
leaf blight in rubber tree**

橡胶南美叶疫病菌检疫鉴定方法

(English Translation)

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Foreword

Rubber South American leaf blight is a risk of phytosanitary disease in China. In order to prevent the pathogen from being introduced into China with the host, it is necessary to correctly master Quarantine and identification methods for *Phytophthora infestans*.

In the process of formulation, this standard analyzes relevant domestic and foreign materials and summarizes the phytosanitary experience for many years, according to the rubber South American leaf blight.

The morphological, biological characteristics and plant pathology of the bacteria were determined to determine the technical indicators.

This standard gives the morphological characteristics of the sexual and asexual state of the *Phytophthora infestans*, and the signs and conditions exhibited on the host.

At the time of identification, the morphological characteristics of sexuality and asexuality, or the morphological characteristics of one generation can be taken as the basis for identification.

Appendix A of this standard is an informative annex.

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

1 Scope

This standard stipulates the quarantine and identification methods for the *Phytophthora infestans* in the entry phytosanitary.

Quarantine identification of pathogens.

2 Principle

Rubber Phytophthora infestans is a living nutrient fungus that infects the leaves, branches, stems, inflorescences, and hazelnuts of the trefoil rubber, causing rubber trees.

The continuous leaves. The pathogen has three types of propagules, namely ascospores, spores and conidia. The germ can be distorted according to its the asexual conidial characteristics, the morphological and biological characteristics of the sexual state, and the symptomatic characteristics of the genus Hevea Identification.

3 Instruments, reagents

3.1

Hand-held magnifying mirror.

3.2

Binocular dissection mirror (10 x ~ 50 x).

3.3

Microscope (100x~1000x).

3.4

Slicer.

3.5

Gadgets and utensils. blades, scalpels, anatomical scissors, tweezers, markers, alcohol or gas lamps, gauze, beakers, enamel cups, grafts Needles, transplant rings, petri dishes, beakers, flasks, slides, coverslips, aluminum platinum paper, Parafilm film, etc.

3.6

Ultra-clean workbench.

3.7

Lactol oil. It is prepared by mixing 20 mL of phenol (heated by water bath), 40 mL of glycerin, 20 mL of lactic acid, and 20 mL of distilled water.

3.8

sodium hypochlorite.

3.9

Alcohol.

3.10

agar.

4 on-site quarantine Check the relevant documents of the goods to be inspected and verify the origin, packaging, steamed bread, name and quantity. Check the buds of the rubber tree propagation material one by one, Whether there are suspicious epidemics in buds, hazelnuts, etc., the focus should be on the leaves. For materials from infected areas, the loading vehicles and Packaging Materials. Then, directly take the site with suspicious symptoms; if no suspicious symptoms are found, then 5% of the proportion of reproductive material Take samples and bring them back to the laboratory for inspection; if the number of samples is less than 10, all are taken.

5.1 Symptom check

Carefully inspect the leaves, branches, stems and capsules of the rubber, especially if the young leaves have symptoms of rubber South American leaf blight. Lesion of the disease Usually there are translucent green-green spots, dull blue-gray or black, perforated. The leaves are curled, deformed, and the wrinkles become black and burnt. Diseased back the surface is grayish white, with dense fluff (ie conidiophores and conidia), and small black spots around the lesion (ie conidia or sub-spins) seat). The petiole is twisted in a spiral shape. The inflorescence turns black and curls. Branches and stems are necrotic. There are raised brown spots on the fruit. In the susceptible organization,