

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

SN/T 1105-2019

Replacing SN/T 1105-2014

**Detection and identification of *Coptotermes curvignathus*
Holmgren**

大家白蚁检疫鉴定方法

(English Translation)

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Foreword

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

This standard replaces Sn/T 1105-2014 "Everybody's termite quarantine and identification method".

Compared with SN/T 1105-2014, the main technical changes of this standard are as follows.

--- Removed normative references;

--- Modified terms and definitions;

- Modified equipment and reagents, integrated morphology and molecular biology;
- Increase the content of on-site quarantine to facilitate the detection of termites;
- Increased identification feature measurement locations;
- Added the host and distribution of termites in Appendix A;
- Added Appendix B to the research overview of the world termite, and clarified the synonym of the termite genus. Delete the original standard approximation Synonyms of termites, Philippine island termites are synonymous with Gerst's stage termites, and Sinabon's termites are synonymous with termites Synonym
- Modified the search form for appendix C termites and their approximate species;
- Added Appendix E color pictures of termites;
- Added Appendix F color pictures of similar termites.

This standard is proposed and managed by the General Administration of Customs of the People's Republic of China.

This standard was drafted. Xiamen Customs of the People's Republic of China, Gongbei Customs of the People's Republic of China.

1 Scope

This standard applies to the quarantine and identification of termites.

2 Terms and definitions

The following terms and definitions apply to this document.

The termite is recessed or protruding at the confluence of the seam of the head cover, which is the opening of the forehead.

Round opening in the middle of the forehead.

Soldier and worker ants refer to the widest part of the head, and winged adults refer to the width of the head including compound eyes.

2.10

The maximum width of the pronotum.

SN/T 1105-201919 ?????? ?????, ?????, ??

3 Basic information on termites

Spreading of bedding materials such as sawn wood and wood packaging spread. The host, distribution and biology are shown in Appendix A. Overview of World Termite Research See Appendix B. Because there are not many similar species of milk termites in the Americas, Africa, and Oceania, they are generally easier to identify. There are many types of milk termites in Asia, which are difficult to distinguish. See Appendix C for the retrieval tables of termites and other important milk termites in Asia.

4 Method steps

According to the damage of termites, you can obtain eggs, soldier ants, worker ants, or adults at the quarantine site or where suspected termites are. Present If field quarantine finds soldier termites with termites, they are identified based on morphological characteristics. If termite soldier ants are not found, but have eggs, worker ants or winged adults when you wait, the conventional PCR detection method and real-time fluorescent PCR detection method of the termite-specific amplification primers of everyone can be accurate and fast.

Quickly distinguish everyone from termites, Gerst milk termites, Taiwan milk termites, and South Asia milk termites.

5.1 Equipment

Microscope, dissecting mirror, bark shovel, handsaw, chainsaw, iron cone, screwdriver, small axe, scalpel, dissecting needle, forceps, petri dish, writing brush, Worm tube, finger tube, micrometer; PCR amplification instrument, real-time fluorescence PCR instrument, electrophoresis instrument, gel imaging system, centrifuge, desktop centrifuge, nuclear Acid protein analyzer, oven, autoclave, electronic balance, mortar, shaker, water bath, vortex shaker, refrigerator, micro-sampler (0.5 μ L, 2 μ L, 10 μ L, 20 μ L, 100 μ L, 200 μ L, 1000 μ L), PCR reaction tube (0.2 mL, 0.5 mL).

5.2 Reagents

75% ethanol, double distilled water, liquid nitrogen, proteinase K (20mg/mL), RNA digestion enzyme, Tris saturated phenol, PremexExTa (2 x), chloroform, isoamyl alcohol, isopropanol, 75% ethanol, 95% ethanol, 10 x PCR buffer, deoxyribonucleoside triphosphates (dNTPs), Tazyme, DL2000 Marker, agarose, ethidium bromide (EB), primer probe, insect genome DNA extraction kit. Extract A. 1% SDS, 50 mmol/L Tris · Cl (PH8.0), 25 mmol/L NaCl, 25 mmol/L EDTA (PH 8.0).

6 On-site inspection

6.1 Check for holes

Tap the ends and middle of the log or wood with an iron cone to hear if there is a hollow echo and find out if there are holes. If it makes an unusual sound, the hole should be pried open and carefully checked for termites.

6.2 Checking the exposed traces of termites

Check whether the quarantine materials such as logs and wood cubes have termite sludge (ie, termite excrement and soil accumulation of ants), fly holes (this hole is winged into SN/T 1105-201919 ?????, ?????, ?????, ??

Insects breeding fly holes, which are often sealed by soil) and vent holes (ie, pinpoint-shaped holes with a diameter of about 1mm outside the ant nest, usually more than ten There are dozens of holes, sometimes with fine soil and guards by soldiers and ants). Use a saw to cut the wood to check the signs of danger, if necessary, Sampling this paragraph back to indoor quarantine. When the log has bark, you need to lift the bark with a shovel or screwdriver and observe whether the inside of the bark and the xylem of the log There are termite hazards or bugs.

6.3 Finding the Nest

On the scene, carefully search the nests of suspicious woods with exposed termite activity. If termite activity is found, collect specimens in time to Prepare for laboratory identification.

7.1 Specimen processing

The specimen was placed in a petri dish and washed with 75% ethanol, and the wood chips and dirt attached to the insect body were gently removed with a fine brush.

Stereomicroscopy Use a dissecting needle to straighten the worm body under the microscope, so that the main characteristics of the identification are on a plane, especially the soldiers need to separate the upper jaw after the worm body softens.

7.2 Morphological characteristics measurement

Specimen bodies were observed with a stereo microscope with a micrometer, and important identification characteristics were measured.

10 (except for a small number of specimens). Soldier ant specimen measurements include. head to palate, head widest, head height, left palate length, long hole diameter, short hole Diameter, widest posterior condyle, narrowest posterior condyle, width of pronotum, prostrate length, and number of antennae. Winged adult specimen measurements include body length (not with wings), head to upper lip, head to upper jaw, head wide with eyes, compound eyes long diameter, compound eyes short diameter, compound eyes to head lower edge, monocular long diameter, monocular short Diameter, fore-wing length (without