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

SN/T 1144-2020

Replacing SN/T 1144-2002

Listed as a quarantine identification method

列当属检疫鉴定方法

(English Translation)

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Foreword

This document is drafted in accordance with GB/T 1.1-2020.

This document replaces SN/T 1144-2002 "Methods of Quarantine and Identification for Phytosanitary Listing".

Compared with SN/T 1144-2002, the main technical changes of this document are as follows.

- The title and structure of the original document have been appropriately adjusted to make it more reasonable;
- Modified the scope of the original document and expanded the scope of application;
- Modified the terms and definitions of the original document;
- Added basic information;
- The spot check method and sampling quantity for on-site quarantine have been deleted;
- Added the identification characteristics of six species;

- Modified the result judgment;

--Informative appendices On the basis of the original appendix A and appendix B, appendix C, appendix D, and appendix E have been added.

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

Drafting organizations of this document. Shenzhen Customs of the People's Republic of China, Shenzhen Institute of Inspection and Quarantine.

1 Scope

This document stipulates the quarantine and identification methods of *Orobanche* spp. among imported and exported plants and plant products.

This document is applicable to the host plants (Cucurbitaceae, Compositae, Leguminosae, Solanaceae, Cruciferae, Cannabis, Flax, Umbelliferae) Quarantine and identification of the genus listed in the entry and exit plant products.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

The following terms and definitions apply to this document.

Root parasitism

The plant uses the sucker developed from the root to reach into the root of the host plant to obtain nutrients.

Spike

The inflorescence axis is long, unbranched, and there are many sessile flowers arranged on it.

Capsule

It is formed by the union of two or more carpels, contains most seeds, and has many ways of cracking when mature.

Scale

Tassel-shaped metamorphic leaves at the base of plant petals.

Reticulum pattern

Distributed on the surface of the seed into a net-like pattern.

Mesh

A network of pits distributed on the surface of the seed.

Lines of reticulum

The raised ribs around the mesh.

4 Basic information

The basic information listed is as follows.

--Scientific name. *Orobanche* spp;

--English name. Broomrape;

--Classification status. Belongs to Angiospermae (Angiospermae), Dicotyledoneae (Dicotyledoneae), Sympetal perianth Class (Sympetalae), Paraitales (Paritales), Orobanchaceae (Orobanchaceae);

--Distribution. There are currently about 140 species in the world, mainly distributed in temperate and subtropical regions, with the most distributed in the former Soviet Union.

Followed by Mongolia, North Korea, Greece, Egypt and other countries, the United States and some European countries are also distributed. About 25 species in China.

--The way of transmission. propagation and dissemination mainly by seeds. The seeds are many and tiny, which are easy to adhere to the crop seeds.

Dispatching for long-distance transmission can also be spread by wind, water, or with humans, animals, and agricultural machinery.

5 Identification method

The genus *Lietang* is an annual rooting parasitic herb, each of which can produce 40,000 to 500,000 seeds, and the seeds are very small (0.2 mm~0.5 mm).

It is almost impossible to detect with the naked eye. According to this feature, the quarantine list is quarantined by the screening and washing method. This standard is judged according to the morphological characteristics of plants and seeds.

species.

6.1 Instruments and appliances

Stereo microscope,, electron microscope scanner, set of sieve. 30 mesh (aperture. 550µm)-500 mesh (aperture. 25µm), meter Measuring device, sample table, sample plate, magnifying glass, tweezers, brush pen, small brush, absorbent paper, funnel, triangular bottle, washing bottle, measuring cup, culture Petri dishes, finger tubes, jars, white

porcelain plates, sample bags, labels, record books, specimen bottles, specimen boxes, mothballs.

6.2 Reagents

1% surfactant or soapy water.

7.1 Active agent flushing method

7.1.1

Put the test sample into the Erlenmeyer flask (the size of the Erlenmeyer flask depends on the number of test samples), and then add 1% less surfactant or fertilizer.

Soap water, then add tap water until it covers the test sample.

7.1.2

Shake well and let stand for 10 min.

7.1.3

Pour the test sample together with the liquid in the Erlenmeyer flask into the upper sieve with 30 mesh (aperture. 550 μ m) and the lower sieve with 300 mesh (aperture.

48 μ m) in the sieve (the diameter of the sieve is preferably 10 cm, the upper part is larger and the lower part is smaller).

7.1.4

Rinse the Erlenmeyer flask 7 to 8 times with tap water, and pour the rinse liquid into the upper sieve to rinse the test sample.

7.1.5

Remove the upper sieve, rinse the wall of the lower sieve with tap water, and after soaking dry with absorbent paper, place the lower sieve directly under the stereo microscope for careful observation.

When suspected seeds are found, they should be picked out and moved to the microscope for confirmation. If necessary, they should be scanned by electron microscope.

7.2 Jacorsohn and Marcus test method

Prepare a funnel-shaped container with a large upper diameter and a small lower diameter. The upper and lower mouths are connected with metal nets and nylon nets are used for enclosing. Inspection Pour the sample into a glass cup and add an aqueous solution containing 1% surfactant, let it stand for 10 minutes and then gently shake it for 1 to 2 minutes, then Rinse with tap water, so that the object to be inspected remains on the upper mouth and the listed seeds are washed onto the lower mouth. For specific experimental