

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

SN/T 5130-2019

Identification of *Oryza granulata* Nees et Arn. Ex Hook.f

疣粒稻鉴定方法

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

This standard was drafted. China Academy of Inspection and Quarantine, Hefei Customs of the People's Republic of China, Chongqing Customs of the People's Republic of China.

1 Scope

This standard specifies the methods for testing and identifying germplasm resources of wart grain rice.

This standard applies to the detection and identification of Verruca and its genetic material.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this document.

file. For undated references, the latest version (including all amendments) applies to this document.

GB/T 6682 Analytical laboratory water specifications and test methods GB/T 14072 Principles and methods for conservation of forest germplasm resources Technical requirements of SN/T 1193 genetic testing laboratory

3.1 Terms and definitions

The following terms and definitions apply to this document.

3.1.1

Flaky, bristle-like, scaly. Spikelets are then arranged into spikes, fingers, racemes or panicles.

3.1.2

Also known as chaff, bran. Part of the spikelet is composed of neatly arranged epidermal cells with papillary protrusions, which are further divided into inner and outer ridges.

3.1.3

It is good for receiving sunlight, and because of its growing part, it can prevent insects, germs, rain, etc. from entering the leaf sheath tube. The leaf tongue is an extension of the leaf sheath, its size, shape, and presence or absence of furry can be used as one of the classification basis. Gramineous leaf tongue, common torn leaf tongue, two deep-lobed tongue, short Leaf tongue, eyelash tongue and long leaf tongue.

3.1.4

Its catalytic function is highly conserved, and its molecular structure has not changed much in the long-term evolution of organisms. It is a single copy and direct line in rice.

Homologous genes can be used as important indicators in biological genetic differentiation and molecular evolution research.

3.2 Abbreviations

The following abbreviations apply to this document.

SN/T 51330-2019 ?????, ?????, ?????,

CTAB. cetyltrimmonium bromide, cetyltrimethylammonium bromide.

PCR. polymerase chain reaction, polymerase chain reaction.

DNA. deoxyribonucleic acid, DNA.

dNTP. deoxyribonucleoside triphosphate, deoxynucleotide triphosphate.

Taq enzyme. aquatic bacteria DNA polymerase.

4 Basic Information

Scientific name. *Oryza sativa* L.

Taxonomic status. Plantae, Angiospermae, Monocotyloneae, Poaceae. There are more than 20 species in the genus *Oryza* (see Appendix A).

5 Method principle

Verrucous oryzae may enter and exit in the form of plants, grains, nucleic acids, etc. For plant and grain samples, you can observe the Plants, spikelets, lemma, preliminary identification based on morphological characteristics (see Appendix A, Appendix B); for samples without nucleic acid and other morphological characteristics, according to the TPI gene sequence specific locus of Verrucous oryzae was designed to carry out PCR detection for accurate identification.

6.1 Instruments and equipment

Liquid nitrogen tank, pure water machine, electronic balance, water bath, autoclave, high temperature drying box, centrifuge, electrophoresis apparatus, PCR instrument, electrophoresis tank, display Micromirror, scanning electron microscope, gel imaging system, high-throughput mill, vortex shaker, adjustable pipette (20 µL, 10 µL, 2.5 µL), adjustable pipette tip, centrifuge tube.

6.2 Reagents

Reagents commonly used for PCR reactions, electrophoresis reagents, and nucleic acid molecular weight standards are all analytical or biochemically pure (unless otherwise specified).

Implementation according to GB/T 6682.

7.1.1 Morphological characteristics of *Oryza* plants

Annual or perennial herbs. Culms erect, clustered.

7.1.1.1 Leaf

Leaf sheath glabrous; leaf tongue long membranous or auricular; leaf blade linear flat and broad.

7.1.1.2 Flowers

Terminal panicles develop loosely and often droop.

SN/T 51330-2019 ?????, ????, ????,?

7.1.1.3 Spikelets

Spikelets contain an amphoteric florets, with two degenerate lemmas attached below them, which are very flattened on both sides; glumes degenerate, showing only a bi-moon-shaped scar on the top of the spikelet. Pregnancy outer scales of hard paper, with small wart spots or fine hairs, with 5 veins, with long awns or pointed tips; the inner and outer ridges are homogeneous, with 3 veins, and the side veins are close the margins are gripped by the 2 veins of the lemma; the scales are 2; the stamens are 6; the stigmas are 2, broombrush-shaped, protruding from both sides of the spikelet.

7.1.2 Morphological characteristics of Verrucous oryzae (see Appendix A and Appendix B)

Perennial herbs. Sometimes with short rhizomes. The culm is 30-70 cm high, flattened, with 5-9 knots.

7.1.2.1 Leaves

Leaf sheath glabrous, 5-8 cm long, shorter than internodes; leaf tongue 1--2 mm long, glabrous, with distinct leaf ears; leaves linear-lanceolate, long it is 5-20 cm wide and 6-20 mm wide, with jagged rough edges along the veins, smooth underside, curled inward when dry, pointed at the tip, and rounded at the base.

7.1.2.2 Flowers

The panicles are simple, erect, 3-12 cm long, with 2-5 branches, rising, sparsely spikelets, and rough edges.

7.1.2.3 Spikelets

Spikelets oblong, about 6 mm long, about 3 times wider, light green or gray; glazes degraded leaving only traces; hooked papillae on inner and outer condyles and there are warts around.