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

SN/T 3402-2012

**Identification genuineness and purity of two-line rice varieties
using DNA analysis method
(English Translation)**

Issued on: December 12, 2012

Implemented on: July 1, 2013

Issued by: General Administration of Customs

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

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

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

This standard was drafted. People's Republic of China Anhui Entry-Rice Research Institute, Anhui Academy of Agricultural Sciences, the Chinese people Hunan People's Republic of Exit Inspection and Quarantine.

1 Scope

This standard specifies the method of rice SSR markers light PTGMS and two-line hybrid rice varieties authenticity and purity.

This standard applies to rice light, PTGMS identification and authenticity and purity of hybrid rice varieties.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3543.2 agricultural seed testing protocols for sampling

3 Terms and Definitions

The following terms and definitions apply to this document.

Rice light, PTGMS ricephotoperiod/thermo-sensitivegenicmalesterileline Also known as the two CMS lines, the use of rice light, temperature sensitive genic male sterile rice male sterile line breeding characteristics, its tables under short-day conditions of low temperature Now male fertility, can be propagated seed; long day at high temperature performance of

male sterility, can be used to seed.

Two-line hybrid rice Rice Using light, PTGMS and restored hybrids produce F1 generation.

Two - line Rice this standard will be two-line hybrid rice sterile line and two line system called two rice.

Microsatellite markers simple sequence repeat (SSR) marker by a few nucleotides (generally 2 to 6) as a tandem repeat unit of tens to hundreds of times as many as the repeat; the basic unit of repetitions Different numbers, thus the formation of polymorphic SSR loci; a pair of specific primers based on SSR on both sides of the seat single-copy conserved sequence spread by SSR sequence, you can reveal the polymorphism.

Standard sample the sample was representative of the certification authority finds that the known characteristics of the variety of species, sexual reproduction, usually seeds.

Principle 4

China's production line on two sterile transgenic rice mainly PSGMS gene pms1, pms3 and temperature sensitive genic male sterile gene tms5, the corresponding molecular markers characteristic of pms1-S1, pms3-C1, tms5-S2, based on these markers characteristic can be determined whether the two water lines Rice; while taking advantage of the rice genome, there are a lot of differences in the number of repeat units SSR among different species, divided by SSR Polymorphism