

ICS 65.020.01

CCS B 16



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

GB/T 29394-2012

**Detection and identification of *Xanthomonas axonopodis* pv.
*citri***

柑桔溃疡病菌的检疫检测与鉴定

Issued on: December 31, 2012

Implemented on: June 1, 2013

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Standardization Technical Committee of Plant Quarantine (SAC/TC271) and focal points. This standard was drafted. National Agricultural Technology Extension Service Center, Plant Quarantine Station of Sichuan Province, Chongqing University. The main drafters of this standard. Wang Fuxiang, Ning Hong, Tan Jiaxing, Yu Xiang, Guo Jin Di, Wang Zhongkang. Citrus canker quarantine pathogen detection and identification

1 Scope

China's national quarantine method for citrus canker - the bacterial disease that raises corky, water soaked lesions on the leaves, twigs and fruit of citrus, that spreads on wind driven rain and on infected planting material, and whose arrival in a producing region has historically been answered by destroying every host tree for some distance around. The standard specifies the technical requirements for the field symptoms of citrus canker, caused by *Xanthomonas axonopodis* pv. *citri*, and for its laboratory identification by the morphology of the pathogen, by immunological methods and by PCR. It applies to the quarantine detection and identification of the pathogen on Rutaceae. The document is written as a decision path rather than as a single test, because that is how a quarantine determination is actually made: the field symptoms narrow the question, the isolation and the colony and cell morphology of the bacterium confirm that a *Xanthomonas* is present, the immunological test gives a rapid answer on a large number of samples, and the PCR gives the specificity needed to name the pathovar and to stand up as the basis of a regulatory decision. The standard sets, for each of those stages, the media and the conditions, the reagents and controls, the primers and the cycling parameters, and the criteria by which a result is read as positive, negative or inconclusive - together with the pathogenicity test that remains the reference when the molecular result has to be confirmed. The sampling of citrus nursery stock follows GB/T 5040-2003. Issued on 31 December 2012 and in force since 1 June 2013, it is held by SAC/TC 271.

This standard specifies the citrus canker (*Xanthomonas axonopodis* pv. *Citri*) Field symptoms and laboratory pathogenic form Identification, immunology and PCR testing of technical requirements. This standard applies to Rutaceae citrus canker quarantine in the detection and identification of bacteria.

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 5040-2003 citrus nursery stock quarantine rules

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Symptomatic plants diseased plant By citrus canker pathogen infection, and it has shown symptoms of host plants.

3.2 Symptomless carrier plants asymptomatic plant By citrus canker infection, but they did not show symptoms of host plants.

3.3 Suspected symptoms suspicious lesion Partially meets the typical symptoms of citrus canker or describe the typical symptoms similar description like symptoms.

4 Basic information of citrus canker

Chinese name. citrus canker. Name. *Xanthomonas axonopodis* pv. *Citri* Vauterin et al 1995. Synonyms. *X. campestris* pv. *Citri* (Hasse) Dye 1978. Disease English name. citrus canker, Bacterial canker of citrus. *Xanthomonas* bacterium belonging to families, *Xanthomonas* spp. Long-distance spread citrus canker mainly through artificial introduction, commodity circulation. Sick seedlings, scion and fruit and other reproductive material is Spread of the disease carrier. Field is spread by wind and rain, insects and farming operations. Citrus canker bacteria related information, see Appendix A.

5 Principle of the method

For citrus canker has become typical symptoms of the sample, since the typical symptoms easy to identify, and fungal pathogens approximate symptoms (see Appendix * * *