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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3728-2013

Rapid determination of Campylobacter jejuni in food for export. Quantum dots immuno-fluorescence method

进出口食品中空肠弯曲菌快速检测方法 量子点免疫荧光法

(English Translation)

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Foreword

This standard is in accordance with GB/T 1.1-2009 given rule drafting.

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

This standard was drafted. People's Republic of China Jiangsu Entry-Exit Inspection and Quarantine Bureau, Inspection and Quarantine of China Academy of Sciences, Hefei the University.

1 Scope

This standard specifies the quantum dot immunofluorescence detection in food exports of C. jejuni.

This standard is applicable to the export of food in rapid detection of Campylobacter 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 4789.9 Microbiological examination of food Campylobacter GB 19489 General requirements for laboratory biosafety

3 Biosecurity

In order to protect the safety of laboratory personnel, the staff should be qualified to detect Campylobacter jejuni, all cultures and waste should participate According to the relevant

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provisions of GB 19489 execution.

4 Technology Overview

This standard uses quantum dots immunofluorescence analysis technique to detect Campylobacter jejuni, mainly includes the following steps.

a) enrichment, sample preparation and enrichment according to GB/T 4789.9 methods.

b) immune beads as a carrier of the bacteria Campylobacter jejuni rapid enrichment of bead surface.

c) The fluorescence quantum dot-labeled solution interaction of Campylobacter jejuni Campylobacter jejuni antibodies and immunomagnetic enrichment and fluorescent Fluorescence microscopy bead surface of the composite, the result is determined.

5 Reagents and materials

5.1
Water-soluble quantum dot surface with a carboxyl group (concentration. 5μmol/L).

5.2
Campylobacter jejuni monoclonal antibody-coated beads immunity (concentration of about 106 beads/mL).

5.3
Campylobacter jejuni polyclonal antibody (concentration of about 1mg/mL).

5.4 1-ethyl - (3-dimethylaminopropyl) carbodiimide (EDC).

5.5
N- hydroxysuccinimide (Sulfo-NHS).

5.6
ultrafiltration tubes (molecular weight cutoff. 10kDa).

5.7
dialysis bag (molecular weight cutoff. 14kDa, diameter 1cm).

5.8
monoamino polyethylene glycol (PEG-NH2, molecular weight. 5kDa).

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