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

SN/T 3872-2014

**Detection of four pathogens in food for export. MALDI-TOF-MS
method**

(English Translation)

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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 Liaoning Province Exit Inspection and Quarantine.

1 Scope

This standard specifies the MALDI-TOF-MS detection of four pathogenic bacteria in food.

This standard applies to food *Salmonella*, *Listeria monocytogenes* bacteria, *Vibrio parahaemolyticus*, *Vibrio cholerae* four kinds of pathogens Rapid detection of other pathogens can refer to use.

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.

National Food Safety Standard GB 4789.4 Microbiological Examination of *Salmonella* food
GB 4789.7 national food safety standards of food microbiology testing *Vibrio parahaemolyticus* test
National Food Safety Standard GB 4789.30 Microbiological examination of food *monocytogenes Listeria* test
Laboratory use specifications and test methods GB/T 6682 Analysis GB 19489 General requirements for laboratory biosafety
SN 0170 export food *Salmonella* (bacteria including Arizona) test method SN/T 0173 Importers and *Vibrio parahaemolyticus* in food testing methods SN/T 0184.1 import and export food

monocytogenes Listeria detection methods SN/T 1022 Vibrio cholerae in food import and export inspection methods NMKLNo.156 food in the detection and enumeration of Vibrio

3 Abbreviations

The following abbreviations apply to this document.

3.1 MALDI-TOF-MS.

Matrix-AssistedLaserDesorption/IonizationTime-of-FlightMassSpectrome-

try, matrix-assisted laser desorption ionization time of flight mass spectrometry.

3.2 CHCA. alpha-cyano-4-hydroxy-cinnamicacid, alpha- cyano-4-hydroxy cinnamic acid.

3.3 ACN. acetonitrile,.

3.4 TFA. trifluoroaceticacid, trifluoroacetic acid.

4 Method summary

MALDI-TOF-MS is applied to the rapid detection of bacterial whole cell technology, based primarily on features present in the bacterial surface proteins Molecular weight information, the completion of the identification and classification of bacteria. Dot matrix solution will be identified colonies sample with a suitable amount of added sample plate, the solvent evaporated After the formation of hair sample matrix co-crystallized by laser radiation as an energy source co-crystals, matrix molecules absorb energy and sample desorption