Chinastandards.org

ICS 65.020.20
CCS B38

SN

# INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# SN/T 3873-2014

## Determination of total mercury in medicinal herbs for export

出口药用植物中总汞的测定

**(English Translation)**

**Issued on: January 13, 2014** **Implemented on: August 1, 2014**

**Issued by: General Administration of Customs**

Preview: page 1 of 4 shown, 8 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3873-2014

Chinastandards.org

# Table of Contents

Foreword

1 Scope

2 Normative references

3 Method summary

4 Reagents and materials

## Foreword

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

Please note that some of the content of this document may involve patents. Distribution of this document Institutions do not assume the responsibility to identify these patents.

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

This standard was drafted. People's Republic of China Beijing Entry-Exit Inspection and Quarantine Bureau.

## 1 Scope

This standard specifies the medicinal plants of total mercury by inductively coupled plasma mass spectrometry (ICP/MS) and atomic fluorescence determination.

This standard applies to safflower, measured Angelica sinensis, ginseng, forsythia, senna and other medicinal plants or medicinal plants like total mercury, Lower limit of detection was 0.005mg/kg.

## 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.

Laboratory use specifications and test methods GB/T 6682 Analysis the first Inductively Coupled Plasma Mass Spectrometry



Preview: page 2 of 4 shown, 8 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3873-2014

## 3 Method summary

The samples were acid digestion, the sample solution is introduced into an inductively coupled plasma mass spectrometer, compared with standard series quantitation.

## 4 Reagents and materials

Unless otherwise stated, all reagents superior grade pure water in line with GB/T 6682 provided a water.

**4.1**
nitrate.

**4.2**
sulfuric acid.

4.3 30% hydrogen peroxide.

**4.4**
sulfate nitrate mixed acid (118). the amount of 10mL of nitric acid (4.1) and 10mL sulfuric acid (4.2), slowly pour 80mL Water, mix carefully after cooling.

**4.5**
mercury standard stock solution. Precision Weigh 0.1354g dried mercury chloride, nitrate plus sulfuric acid mixture (118) (4.4), dissolved moved into 100mL volumetric flask, and dilute to volume, mix, and this solution is equivalent to 1mg per milliliter of mercury; or 1000mg/L (GB W08617), China Institute of Metrology.

**4.6**
gold standard stock solution. 100mg/L (GB W08650), China Institute of Metrology.

**4.7**
yttrium standard stock solution. 1000mg/L (GB W08657), China Institute of Metrology.

4.8 2% nitric acid solution. 20mL exact amount of nitric acid (4.1), diluted with water to 1000mL volumetric flask.

**4.9**
Mercury intermediate standard solution. take the exact amount of mercury standard stock solution (4.5) 1mL, plus 2% nitric acid solution (4.8) diluted to 100mL volume Flask, the standard solution of 10mg/L mercury standard intermediate solution.

**4.10**
gold standard intermediate solution. the exact amount of the gold standard stock solution (4.6) 10mL, plus 2% nitric acid solution (4.8) diluted to volume 100mL flask, the standard



Preview: page 3 of 4 shown, 8 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3873-2014

Chinastandards.org

solution of 10mg/L gold standard intermediate solution.

**4.11**

yttrium internal standard solution. take the exact amount of yttrium standard stock solution (4.7) 10mL, plus 2% nitric acid solution (4.8) diluted to volume to 1000mL Flask, the standard solution of 10mg/L yttrium internal standard solution (as the ICP/MS detection of online internal standard to calibrate the sensitivity of the instrument).



Preview: page 4 of 4 shown, 8 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3873-2014