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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3874-2014

Determination of total arsenic in medicinal herbs for export

出口药用植物中总砷的测定

(English Translation)

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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 method for determination of medicinal plants hydride generation atomic fluorescence spectrometry of total arsenic and inductively coupled plasma mass spectrometry.

This standard applies to safflower, measured Angelica sinensis, ginseng, forsythia, senna and other medicinal plants or medicinal plants like total arsenic, Lower limit of detection was 0.010mg/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 method hydride generation atomic fluorescence spectrometry

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3 Method summary

The samples were acid digestion, the sample solution is introduced into hydride atomic fluorescence 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
sulfuric acid.

4.2
nitrate.

4.3
hydrochloric acid.

4.4
perchloric acid.

4.5
sodium hydroxide.

4.6
magnesium nitrate.

4.7
magnesium chloride.

Thiourea 4.8.

4.9
potassium borohydride.

4.10
thiourea solution (50g/L). Weigh 50.0g of thiourea (4.8), was dissolved in 1000mL of water, and mix.

4.11
hydrochloric acid solution (11). Measure 50mL of hydrochloric acid (4.3), and slowly poured into 50mL water, and cooled after mixing carefully.

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4.12

sulfuric acid solution (19). the amount of 10mL sulfuric acid (4.1), and slowly poured into 90mL of water, mix carefully after cooling.

4.13

sodium hydroxide solution (100g/L). Weigh 100.0g sodium hydroxide (4.5), was dissolved in 1000mL of water, and mix.

4.14

magnesium nitrate solution (150g/L). Weigh 150.0g magnesium nitrate (4.6), was dissolved in 1000mL of water, and mix.

4.15

standard stock solution. arsenic, 1000mg/L (GB W08611), China Institute of Metrology; or accurately weighed dried at 100 °C 2h or more of arsenic trioxide (As2O3) 1.3200g, plus 100g/L sodium hydroxide solution (4.13) 10mL dissolved, add water into 1000mL volumetric flask, add (19) of sulfuric acid (4.12) 25mL, washed with water to volume, mix, and this solution is equivalent to 1mg per milliliter of arsenic.

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