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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3134-2012

Determination of thimerosal residues in foodstuffs of animal origin for export. Liquid chromatogram-atomic fluorescence spectrometry (LC-AFS) method

出口动物源性食品中硫柳汞残留量的测定 液相色谱-原子荧光光谱法

(English Translation)

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Preview: page 1 of 4 shown, 11 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3134-2012

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Table of Contents

Foreword

1 Scope

2 Principle of the method

3 Reagents

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. Release mechanism of the present document does not assume responsibility for the identification of these patents.

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

This standard was drafted. Tianjin People's Republic of China Entry-Exit Inspection and Quarantine Bureau, Shenzhen People's Republic of China Entry-Exit Inspection and Quarantine Bureau of Instrument Co., Ltd. Beijing Ji-day.

1 Scope

This standard specifies the foods of animal origin thimerosal Residues of liquid chromatography - atomic fluorescence spectrometry detection.

This standard applies to exports of fish, chicken, beef, pork, lamb, liver, milk, eggs thimerosal Residues Determination.

2 Principle of the method

Sample residues with thimerosal extract extracted by liquid chromatography after the first, and then mixed with air and oxidizer mix, by UV Light irradiation, thimerosal is oxidized to inorganic mercury, the last occurrence of the hydrogenation reaction with a reducing agent and hydrochloric acid into the atomizer, atomic fluorescence analysis Determination. External standard.

3 Reagents

Unless otherwise indicated, the reagents used were of analytical grade, test water is deionized water.

Preview: page 2 of 4 shown, 11 in the full document. Complete English PDF, instant download:
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3.1
acetonitrile. chromatography.

3.2
Methanol. chromatographically pure.

3.3
hydrochloride. pure class distinctions.

3.4
ammonium acetate.

3.5
cysteine.

3.6
potassium hydroxide.

3.7
potassium borohydride.

Thiourea 3.8.

3.9
potassium chloride.

3.10
potassium persulfate.

3.11
alkaline extraction solution (5% KOH 0.5% thiourea). Weigh potassium hydroxide (3.6) 50g, thiourea (3.8) 5g dissolved in water and diluted to 1000mL mix.

3.12
Acid extract (20% HCl 1% thiourea 0.15% KCl). amount of hydrochloric acid (3.3) 200mL, weighed thiourea (3.8) 10g, chlorinated Potassium (3.9) 1.5g was dissolved in water and diluted to 1000mL mix.

3.13
carrier (7% HCl). amount of hydrochloric acid (3.3) 70mL, slowly poured into 930mL of water, and mix.

3.14
reductant (0.5% KOH 2% KBH4). Weigh potassium hydroxide (3.6) 5g, potassium borohydride (3.7) 20g dissolved in water and diluted to 1000mL mix.

Preview: page 3 of 4 shown, 11 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3134-2012

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3.15

oxidant (0.5% KOH 0.3% K2S2O8). Weigh potassium hydroxide (3.6) 5g, potassium persulfate (3.10) 3g was dissolved in water, and Diluted to 1000mL mix.

3.16

cleaning fluid. amount of methanol (3.2) 10mL, 90mL poured into water, and mix.

3.17

thiomersal (thimerosal, CAS number. 54-64-8, C9H9O2HgNaS) Standard. 97% or greater purity.

3.18

thimerosal standard stock solution. accurately weighed amount of thimerosal standard deionized water to form a concentration of 1mg/mL standard Stock solution. Stored at 0 °C ~ 4 °C.

Preview: page 4 of 4 shown, 11 in the full document. Complete English PDF, instant download:
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