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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3138-2012

Determination of bromate in flour products for export. Ion chromatography with postcolumn derivatization

出口面制品中溴酸盐的测定 柱后衍生离子色谱法

(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 Hubei Entry-Exit Inspection and Quarantine of Hunan People's Republic of China Bureau, People's Republic of China Guangdong Entry Inspection and Quarantine Bureau.

1 Scope

This standard specifies the ion chromatographic method after bromate in flour products derived column.

This standard applies to the determination of bread, buns, biscuits, fritters and other flour products bromate.

Principle 2

Potassium bromate in samples by ultrasonic extraction and centrifugation, potassium hydroxide solution or sodium hydroxide solution as eluent by Ion Chromatography After the column separation of bromate with hydroiodic acid derivatives, determination of bromate derivative UV detector, converted obtained sample containing potassium bromate the amount. Using external standard.

3 Reagents

Unless otherwise specified, the reagents were of analytical grade, ultra-pure water was used, resistivity of 18.2Mohm. cm.

3.1

potassium bromate standards. purity greater than or equal to 99.9%.

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3.2
Sodium hydroxide. pure class distinctions.

3.3
potassium iodide.

3.4 57% (by mass) aqueous solution of hydrogen iodide. the relative density of 1.70.

3.5
molybdate tetrahydrate.

3.6
petroleum ether. boiling range 30 °C ~ 60 °C.

3.7
ammonium molybdate solution. Accurately weigh 0.247g (accurate to 0.1mg) ammonium molybdate tetrahydrate (3.5), dissolved in water and diluted to 100mL. At 4 °C preservation, valid for one month.

3.8
potassium iodide solution. Accurately weigh 43.1g (accurate to 0.01g) of potassium iodide (3.3), was added 500mL water dissolved, 215μL molybdenum Ammonium solution (3.7), diluted with water to 1L, ultrasound 20min. From light, valid 3d.

3.9
bromate derived reagents. take potassium iodide solution (3.8), prepared, preparation methods may be derived reagent preparation device online by bromate See Appendix A.

3.10
Eluent stock solution [c (NaOH) = 100mmol/L]. 4G weighed (accurate to 0.1g) of sodium hydroxide (3.2), add water to 1000mL, and mix. You can also use automatic eluent generator OH- type preparation.

3.11
bromate standard solution [c (BrO-3) = 1000μg/mL]. Accurately weigh 0.131g (accurate to 0.1mg) of potassium bromate standards (3.1), dissolved in water, and dilute to 100mL. At 4 °C preservation, valid for six months.

3.12
bromate standard solution [c (BrO-3) = 10μg/mL]. Pipette bromate standard stock solution (3.11) 1.0mL in 100mL capacity Bottle, water volume. At 4 °C preservation, valid for one month.

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4 Instruments and equipment

4.1

Ion chromatograph. with a UV detector.

4.2

Derivative device. it should be equipped with a constant flow pump (the flow rate is adjustable from 0mL/min ~ 1.0mL/min), the heater, the reaction tube derivatives, bromate

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