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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3637-2013

Determination of isomaltose and tagatose in food for export. HPLC method

出口食品中异麦芽糖、塔格糖的测定 高效液相色谱法

(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 Hebei Exit Inspection and Quarantine.

1 Scope

This standard specifies a high performance liquid chromatographic method maltose, tagatose different food for export.

This standard applies to fruit drinks, measured maltose, tagatose content of milk drinks, honey, candy, cookies, cereal, bacon vary.

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

3 Method summary

Sample isomalt, tagatose water extraction, and the extract after protein precipitation with C18 column purification or directly to a C18 column purification, high performance liquid

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Phase chromatography, external standard.

4 Reagents and materials

Unless otherwise indicated, reagents were of analytical grade water as a water GB/T 6682 regulations.

4.1
acetonitrile chromatography.

4.2
zinc acetate.

4.3
potassium ferrocyanide.

4.4
zinc acetate solution (219g/L). Weigh 219g zinc acetate (4.2), dissolved in water and diluted to 1L.

4.5
potassium ferrocyanide solution (106g/L). Weigh 106g of potassium ferrocyanide (4.3), dissolved in water and diluted to 1L.

4.6
Standard substance. isomalt (formula C12H22O11, CAS number. 499-40-1), Tagatose (molecular formula C6H12O6, CAS number.

87-81-0) purity of greater than or equal to 95%.

4.7
standard stock solution. accurately weighed amount of isomaltulose, tagatose standard substance (4.6), formulated as a water 50.0mg/mL of standard, respectively Stock solution at 4 °C refrigerator.

4.8
Standard curve series. standard stock solution (4.7) with water progressively diluted isomalt concentration of 1.0mg/mL, 2.0mg/mL, 5.0mg/mL, 10.0mg/mL, 20.0mg/mL, the concentration of tagatose were 0.4mg/mL, 0.8mg/mL, 2.0mg/mL, 4.0mg/mL, the standard curve solution 8.0mg/mL, and prepared before use.

4.9
C18 SPE column, 500mg, 3mL. Before using successively with 5mL methanol and 5mL of water conditions, keeping the cylinder wetting.

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4.10 0.45μm membrane, water.

5 Instruments and equipment

5.1

High performance liquid chromatograph. equipped with a differential refractive index detector.

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