

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 4783-2017

**Determination of kestose, nistose and fructofuranosylnystose
in export food--High performance liquid chromatography
method**

出口食品中低聚三果糖、低聚四果糖、低聚五果糖的测定 高效液相法
(English Translation)

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Foreword

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

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

This standard was drafted. Guangdong Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, international inspection and quarantine standards and technical regulations in the study Heart, Tianjin Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, South China Agricultural University.

1 Scope

This standard stipulates the determination of three kinds of oligofructose, such as infant formula rice flour, rice milk powder and low-poly cane fruit trisaccharide, tetrasaccharide and pentasaccharide in milk powder.

Method.

This standard is applicable to the determination of low poly cane fruit trisaccharide, tetrasaccharide and pentasaccharide in infant formula rice flour, rice milk powder and milk powder.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6682 Analytical laboratory water specifications and test methods

3 Method summary

After precipitation of protein and starch by precipitation of acetic acid water and methanol solution at a given pH, the oligofructose in the sample is then treated with beta-galactosidase.

Remove galactose and lactose, pass the membrane test, and quantify by external standard method.

4 Reagents and materials

Unless otherwise stated, the reagents used were of analytical grade and the water used secondary water specified in GB/T 6682.

4.1

Methanol (CH_4O), analytically pure.

4.2

Acetic acid ($\text{C}_2\text{H}_4\text{O}_2$), analytically pure.

4.3

Acetonitrile ($\text{C}_2\text{H}_3\text{N}$), chromatographically pure.

4.4

Disodium hydrogen phosphate (Na_2HPO_4), analytically pure.

4.5

Citric acid ($\text{C}_6\text{H}_8\text{O}_7$), analytically pure.

4.6

oligofructose standard. canetriose ($\text{C}_{18}\text{H}_{32}\text{O}_{16}$, CASN o.. 470-69-9), cane fruit tetrasaccharide ($\text{C}_{24}\text{H}_{42}\text{O}_{21}$, CASN o..

13133-07-8), cane fruit pentasaccharide ($\text{C}_{30}\text{H}_{52}\text{O}_{26}$, CASN o.. 59432-60-9) three standards, purity $\geq 99\%$.

4.7

Cane fruit trisaccharide, cane fruit tetrasaccharide, cane fruit and pentasaccharide mixed standard stock solution. weigh the cane, fructose, sugar, sugar, cane and fruit 2.5g of the standard product, dissolved together in water and fixed to a 50mL volumetric flask, and prepared into a sugar cane trisaccharide and cane fruit with a concentration of 50000mg/mL respectively.

A standard solution of sugar, cane and fruit sugar mixed, stored at $2^\circ\text{C} \sim 4^\circ\text{C}$, valid for 3 months.

4.8

Standard intermediate solution of cane fructose, cane fruit tetrasaccharide and cane fruit and pentasaccharide. accurately measure the single standard solution of 50000mg/mL (4.7) 5.0mL, fixed to 25mL with water, formulated into a concentration of 10000mg/mL of cane fructose, cane fruit four sugar, cane fruit and five sugar mixed standard Solution.

4.9

Candied fruit trisaccharide, cane fruit tetrasaccharide, cane fruit and pentasaccharide standard mixed working solution. separately transfer 10000mg/mL cane fructose, tetrasaccharide, pentasaccharide Standard intermediate solution (4.8) 5mL, 2.5mL, 1mL, 0.5mL, 0.1mL, with pure water to a volume of 10mL into 5000mg/mL, 2500mg/mL, 1000mg/mL, 500mg/mL, 100mg/mL standard working solution, stored at 4 ° C, can be used for 3 months.

4.10 1mol/L disodium hydrogen phosphate buffer with a pH of 5.0. first weigh 1.92g of citric acid and dissolve it in 10mL of pure water.