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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3848-2014

Determination method of tea polyphenol residues in foods for export. HPLC method

出口食品中茶多酚的检测方法 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.

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

This standard by the People's Republic of China Entry-Exit Inspection and Quarantine Bureau, Dongguan Comprehensive Technology Center, the People's Republic of China Beijing Entry Inspection and Quarantine Bureau responsible for drafting.

1 Scope

This standard specifies the HPLC method for the export of food polyphenols.

This standard applies to edible oil, cakes, convenience rice, fried foods and meat sausage tables epigallocatechin gallate (EGCG),

Table epigallocatechin (EGC), epicatechin gallate (ECG), and epicatechin (EC) determination does not apply to tea and tea products.

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

Edible oil extracted with methanol, freezing, centrifugation and other samples with n-hexane extraction, the extract was frozen, after centrifugation, HPLC Cytometry, external standard.

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4 Reagents and materials

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

4.1
acetonitrile. HPLC grade.

4.2
Methanol. HPLC grade.

4.3
formic acid. HPLC grade.

4.4
epigallocatechin gallate standard (EGCG). CAS No. 989-51-5, molecular formula C22H18O11, molecular weight 458.37, purity of greater than or equal to 95%.

Table 4.5 Standard epigallocatechin (EGC). CAS No. 970-74-1, molecular formula C15H14O7, molecular weight 306.27, purity large

Than or equal to 95%.

4.6
epigallocatechin gallate standard (ECG). CAS No. 1257-08-5, Formula C15H18O10, molecular weight 442.37, 92% or greater purity.

4.7
Standard epicatechin (EC). CAS No. 490-46-0, molecular formula C15H14O6, molecular weight 290.27, purity greater than or equal at 97%.

4.8
polyphenol component standard stock solution. accurately weighed amount of EGCG, EGC, ECG, EC standards (accurate to 0.0001g), with Dissolved in methanol and set the volume to 10mL, that was EGCG, EGC, ECG, EC concentrations of standard solution 0.5mg/mL of, 0 °C ~ at 4 °C preservation, valid for two weeks.

4.9
polyphenol components were mixed standard working solution. Apply the above components polyphenols standard stock solutions were necessary, appropriate diluted with water when mixed standard working solution concentration using now.

4.10
microporous membrane. 0.45μm, organic phase.

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