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SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3865-2014

Determination of lycopene in health foods for export. LC-MS/MS method

出口保健食品中番茄红素的测定 液相色谱-质谱/质谱法

(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. Chinese Academy of Inspection and Quarantine, Chongqing, People's Republic of China Exit Inspection and Quarantine.

1 Scope

This standard specifies the lycopene in health foods by liquid chromatography - mass spectrometry/mass spectrometry methods.

This standard applies to lycopene, capsules liquid chromatography - mass spectrometry/mass spectrometry and confirmation.

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 potassium hydroxide alcohol solution after saponification with 1% (mass concentration) of 2,6-di-tert-butyl-4-methyl phenol (BHT) petroleum extraction, After the extract was neutral alumina column purification, liquid chromatography - tandem mass

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spectrometer, external standard.

4 Reagent material

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

4.1
petroleum ether. HPLC fractions.

4.2
dichloromethane. HPLC fractions.

Tert-butyl methyl ether 4.3. HPLC fractions.

4.4
acetonitrile. HPLC fractions.

4.5 2,6-di-tert-butyl-4-methyl phenol (BHT). pure class distinctions.

4.6
potassium hydroxide.

4.7
ethanol.

4.8
dissolved solution. Weigh 1.0gBHT, dissolved in methylene chloride and dilute to 100mL.

4.9
Extraction solution. Weigh 10.0gBHT, dissolved with petroleum ether and dilute to 1000mL.

4.10
volume solution. Weigh 1.0gBHT, with 100mL acetonitrile - was dissolved in petroleum ether (19 volume) and constant volume.

4.11 50% potassium hydroxide solution (mass concentration). Weigh 50.0g of potassium hydroxide dissolved in water and dilute to 100mL.

Lycopene 4.12 Standard. CAS. 502-65-8, purity >=99%, - at 70 °C storage.

4.13
lycopene standard stock solution. weigh the amount of lycopene standard (4.12), was dissolved in a dissolver solution (4.8) and set the volume to 10mL, Fan Lycopene concentration of 100μg/mL, placed in -18 °C refrigerator away from light, valid for three months.

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4.14

lycopene standard working solution. extract as necessary with a blank sample standard stock solution (4.13) diluted to 0.01μg/mL, 0.05μg/mL, the standard working solution 0.10μg/mL, 1.0μg/mL, 5.0μg/mL, 10.0μg/mL of.

4.15

neutral alumina (75μm ~ 150μm). 105 °C drying 2h, cooled to room temperature in a desiccator, per 100g of neutral alumina added 2mL drop into the water alive, after mixing sealed after placing 12h use.

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