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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3638-2013

Determination of fat-soluble colorants in food for export

出口食品中脂溶性着色剂的测定出口食品中脂溶性着色剂的测定

(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 the export of food in Sudan Orange G, methyl yellow, Para Red, Citrus Red No. 2, Sudan G, Sudan I, Sudan II, Sudan III, Sudan Red 7B, Sudan B, Sudan IV total of 11 kinds of two methods for determining fat-soluble colorants, namely high performance liquid chromatography (HPLC method) and liquid chromatography - mass spectrometry/mass spectrometry (LC-MS/MS method).

This standard applies to chili, chili sauce, coated peanuts, sausages and candy Sudan Orange G, methyl yellow, Para Red, Citrus Red No. 2, Sudan Red G, Sudan I, Sudan II, Sudan III, Sudan Red 7B, Sudan B, measured Sudan IV11 fat-soluble colorant.

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

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3.1 Principle

Using ethyl acetate or acetonitrile - ethyl acetate solution was extracted fat-soluble food colorant, by gel permeation chromatography (GPC), eluted with Equipped with a diode array detector performance liquid chromatograph, external standard.

3.2 Reagents and materials

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

3.2.1
ethyl acetate.

3.2.2
cyclohexane.

3.2.3
Methanol. HPLC fractions.

3.2.4
acetonitrile. HPLC fractions.

3.2.5
over anhydrous sodium sulfate.

3.2.6
ethyl acetate - acetonitrile (11 volume). Equal volumes of ethyl acetate (3.2.1) and acetonitrile (3.2.4) were mixed uniformly.

3.2.7
ethyl acetate - cyclohexane (11, volume ratio). Equal volumes of ethyl acetate (3.2.1) with cyclohexane (3.2.2) were mixed uniformly.

3.2.8
Standard materials. Sudan Orange G, methyl yellow, Para Red, Citrus Red No. 2, Sudan G, Sudan I, Sudan II, Sudan III, Sudan 7B, Sudan B, Sudan IV. purity of greater than or equal to 98%, stored in a refrigerator protected from light, for more information see Appendix A.

3.2.9
Standard stock solution. Weigh separately Sudan Orange G, methyl yellow, Para Red, orange red No. 2, Sudan G, Sudan I, Sudan II, Sudan III, Sudan Red 7B, Sudan B, Sudan IV standard each 10mg (accurate to 0.1mg), respectively, with ethyl acetate each volume to 100mL, formulated as standard stock solution 100μg/mL of. This solution was below 4 °C

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stored.

3.2.10

intermediate mixed standard solution. accurate Pipette Sudan Orange G, methyl yellow, Para Red, orange red No. 2, Sudan G, Sudan I, Sudan II, Sudan III, Sudan Red 7B, Sudan B, Sudan IV standard stock solution of each 1mL to 100mL flask with methanol to volume with Prepared at a concentration of 1μg/mL, the following 4 °C stored.

3.2.11

mixed standard working solution. methanol mixed intermediate standard solution stepwise diluted to 20ng/mL, 50ng/mL according to need,

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