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

SN/T 3849-2014

**Determination of antioxidants in foodstuffs for export
(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 of the People's Republic of China.

This standard was drafted. People's Republic of China Shaanxi Exit Inspection and Quarantine, Beijing People's Republic of China Entry-Exit Inspection and Quarantine Bureau, Chinese Academy of Inspection and Quarantine.

1 Scope

This standard specifies two methods in food for export 13 kinds of antioxidants, namely high performance liquid chromatography (HPLC), liquid chromatography -Mass/mass spectrometry (LC-MS/MS).

This standard applies to edible oil, butter, fried nuts, nuts, instant noodles, flour cereals, oatmeal, puffed food, bacon, dried fish, oil Fried pasta, biscuits, gum base fructose tertiary butyl hydroquinone (TBHQ), butylated hydroxytoluene (BHT), tert-butyl anisole (BHA), Propyl gallate (PG), octyl gallate (OG), gallic acid lauryl acrylate (DG), n-dihydro nordihydroguaiaretic acid (NDGA), 2,6- di-t Butyl-4-hydroxymethyl-phenol (Ionox-100), rutin (Rutin), quercetin (QR), ethoxyquin (EQ) and 4-hexylresorcinol (4-HR), gallic acid isoamyl ester assay (IAG) and other 13 kinds of antioxidants.

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.

GB/T 5009.56-2003 pastry analysis of hygienic standard Laboratory use specifications and

test methods GB/T 6682 Analysis the first method performance liquid chromatography (HPLC) Principle 3 Acetonitrile saturated samples antioxidants extracted, C18 solid-phase extraction (SPE), HPLC determination, external standard.

4 Reagents and materials

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

4.1

Methanol. chromatographically pure.

4.2

acetonitrile. chromatography.

4.3

acetic acid.

4.4

hexane. chromatographically pure.

4.5

L- ascorbyl palmitate (AP).

4.6

petroleum ether. boiling range 30 °C ~ 60 °C.

4.7

anhydrous sodium. 400 °C burning 4h.

4.8

aqueous acetic acid (1.5% by volume). precise amount of 15mL 985mL acetic acid and water, mixing spare.

4.9

acetic acid methanol solution (1.5% by volume). precise amount of 15mL and 985mL methanol and acetic acid, mixing spare.

4.10

aqueous acetonitrile (55 volume). precise amount of 50mL and 50mL acetonitrile and water, mixing spare.

4.11

hexane saturated acetonitrile. was added n-hexane, standing layer after shaking well.

4.12

acetonitrile saturated with n-hexane. was added acetonitrile, standing layer after shaking well.

Saturated acetonitrile containing 4.13 AP (0.1g/L). 1L hexane saturated with acetonitrile (4.11) was dissolved in 0.1g of L- ascorbyl palmitate