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

GB/T 23296.8-2009

**Food contact materials -- Polymer -- Determination of
acrylonitrile in food simulants -- Gas chromatography**

食品接触材料 高分子材料 食品模拟物中丙烯腈的测定 气相色谱法

(English Translation)

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Foreword

The standard reference European Standard EN13130-3:2004 "food contact plastic materials and products for restricted substances - Part 3. Food Products and food simulants acrylonitrile Determination "(in English) to develop.

Appendix A of this standard is an informative annex.

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

This standard by the National Import and Export Food Safety Inspection Standardization Technical Committee (SAC/TC445) centralized.

This standard was drafted. People's Republic of China Hubei Exit Inspection and Quarantine, Ningbo Entry-Exit Inspection and Quarantine of People's Republic of China Bureau of Haidian District, the product quality supervision and inspection, China Inspection and Quarantine Science Research Institute, People's Republic of China Guangdong Entry-Exit Inspection and Quarantine Bureau, the National Food Quality Supervision, Inspection and Safety Center.

1 Scope

This standard specifies the method for the determination of acrylonitrile in food simulants.

This standard applies to water, 3% (mass concentration) solution of acetic acid, 10% (volume fraction) ethanol and other water-based food simulants and olive oil Determination of acrylonitrile.

Water-based food simulants acrylonitrile lower limit of detection was 0.02mg/L, olive oil acrylonitrile lower limit of detection was 0.02mg/kg.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) GB/T 23296.1-2009 plastic food contact materials restricted substances in food and food simulants to specific substances in plastics Migration testing and determination of methods and conditions of exposure to food simulants Guide selection Principle 3 After food simulant acrylonitrile by headspace in the column and the internal standard propionitrile and separated from other components, with nitrogen and phosphorus detector inspection Measure, within the standard method.

4 Reagents and materials

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

Acrylonitrile 4.1 standard. purity of greater than 99%.

4.2

propionitrile standards. purity of greater than 99%.

4.3

propylene carbonate.

4.4

glacial acetic acid.

4.5

ethanol.

4.6

olive oil.

4.7 3% (mass concentration) acetic acid solution. Weigh 30g (accurate to 0.1g) in glacial acetic acid (4.4) in 1L flask, water volume.

4.8 10% (by volume) ethanol. Measure 100mL anhydrous ethanol (4.5) in 1L flask, water volume.

4.9

acrylonitrile stock standard solution (12.5mg/mL). Measure 50mL propylene carbonate (4.3) in 100mL flask, tightly closed, weighing (Accurate to 0.0001g). Adding about 1.25g of acrylonitrile (4.1), cover tightly and shake. Re-weighed (accurate to 0.0001g), followed by carbon Malonic acid esters volume. Calculate the actual concentration of acrylonitrile standard stock solution.

Acrylonitrile 4.10 standard solution (0.125mg/mL). accurate Pipette 10.0mL acrylonitrile standard stock solution (4.9) dissolved in 90.0mL Propylene carbonate, shake, the standard stock solution (4.9) diluted 10-fold. Repeat the above operation, the standard stock solution (4.9) diluted 100-fold.

4.11

acrylonitrile intermediate standard solution (0 μ g/mL ~ 25 μ g/mL). accurate Pipette respectively acrylonitrile standard solution (4.10) 0mL, 2.0mL, 4.0mL, 6.0mL, 8.0mL, 10.0mL in six 50mL vial (5.3), and successively added 50.0mL,