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

GB/T 7717.17-2009

**Acrylonitrile for industrial use -- Part 17: Determination of
content of copper -- Graphite furnace atomic absorption
spectrometer method**

工业用丙烯腈 第17部分：铜含量的测定 石墨炉原子吸收法
(English Translation)

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Foreword

GB/T 7717 "Acrylonitrile for industrial use" is divided into the following sections.

- Part 1. Specification;
- Part 5. Determination of acidity, pH and titration values;
- Part 8. Determination of total aldehyde content spectrophotometry;
- Part 9. Determination of total cyanide titration;
- Part 10. Determination of the peroxide content spectrophotometry;
- Part 11. Determination of iron and copper content spectrophotometry;
- Part 12. Determination of purity and impurity gas chromatography;
- Part 15. Determination hydroxyanisole content spectrophotometry;
- Part 16. Determination of iron content by graphite furnace atomic absorption spectrometry;
- Part 17. Determination of copper content - Graphite furnace atomic absorption spectrometry.

This section GB/T 7717 Part 19.

This part is proposed by the China Petroleum and Chemical Corporation.

This part of the National Standardization Technical Committee Petrochemical Chemical Technical Committee (SAC/TC63/SC4) centralized.

This section drafted by. China Sinopec Shanghai Petrochemical Company Limited, China Petroleum & Chemical Corporation Shanghai Petrochemical Institute.

1 Scope

This section specifies the determination by graphite furnace atomic industry acrylonitrile content of copper absorption.

This section applies to the determination of trace copper acrylonitrile, measurement range (0.010 ~ 1.000) mg/kg.

This section is not intended to illustrate its use of all safety-related issues. The user's responsibility to take appropriate safety and health measures Facilities, to ensure compliance with the provisions of the relevant national regulations.

2 Normative references

The following documents contain provisions which, through reference to GB/T 7717 this section, constitute provisions of this part. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents GB/T 3723 Sampling of chemical products for industrial use General Safety (GB/T 3723-1999, idt ISO 3165. 1976) GB/T 6680 General rules for sampling liquid chemical products GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) GB/T 8170 repair value expressed about the rules and limit values and judgment

3 Method summary

Acrylonitrile sample to be tested and in accordance with 1.4 volume ratio of ethanol to dilute the sample backward, the sample of copper in the graphite tube Plains Protonated, absorbance was measured at 324.8nm wavelength. Quantified using a standard curve.

4 Reagents and materials

4.1

Carrier gas. high-purity argon, purity (volume fraction) of not less than 99.999%.

4.2

Copper standard solution. 0.1mg/mL, prepared according to GB/T 602.

4.3

Ethanol. GR level, the copper content is less than 5ng/mL.

4.4

Distilled water. water should conform to two GB/T 6682 regulations.

5 Instruments

5.1

Atomic absorption spectrometer. with graphite furnace and autosampler.

5.2

Copper hollow cathode lamp.

Means electronic integrator or spectral data processing means 5.3 records.

5.4

general laboratory equipment.

6 Sampling

According to GB/T 3723 and GB/T 6680 the technical requirements to take samples.