

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

SN/T 0736.13-2011

Replacing SN/T 0759.1-1999

**Test method of import and export fertilizers. Part 13:
Determination of copper, zinc, iron, manganese, magnesium,
cobalt and nickel. Atomic absorption spectrometer method**

进出口化肥检验方法 第13部分：火焰原子吸收光谱法测定铜、锌、铁、
(English Translation)

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Foreword

SN/T 0736 "Importers fertilizer test methods" standard series is divided into 14 parts.

- Part 1. sampling and sample preparation;
- Part 2. Determination of moisture;
- Part 3. Determination of particle size;
- Part 4. Flame atomic absorption spectrometric method for the determination of sodium content;
- Part 8. Determination of shrinkage diurea content;
- Part 10. Determination of the free acid;
- Part 11. automatic analyzer nitrogen content;
- Part 12. Determination of Arsenic, chromium, cadmium, mercury, lead by inductively coupled plasma mass spectrometry;
- Part 13. Flame atomic absorption spectrometric method for the determination of copper, zinc, iron, manganese, magnesium, cobalt, nickel content;
- Part 14. Determination of Inorganic anions by ion chromatography.

This is Part 13 SN/T 0736 "Importers fertilizer test methods" series of standards.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section compared with the SN/T 0759.1-1999, with the following major differences.

- Increased the determination of cobalt atomic absorption spectrometry;
- Increased the determination of nickel by atomic absorption spectrometry;
- Increasing the precision of the data;

--- According to GB/T 1.1 requirements for standard text made editorial changes.

Since the implementation of this standard instead of the SN/T 0759.1-1999.

This section proposed and managed by the National Certification and Accreditation Administration Committee.

This section is drafted. Tianjin People's Republic of China Exit Inspection and Quarantine.

1 Scope

This section provides the determination of the import and export of fertilizers in copper, zinc, iron, manganese, magnesium, cobalt, nickel, atomic absorption spectrometry.

This section applies to the copper, zinc, iron, manganese, magnesium, cobalt, nickel in the import and export of fertilizers.

Each element in the range. 0.0001% to 0.04% copper, 0.003% to 0.1% zinc, 0.02% to 1.0% Fe, 0.0016% to 0.1% manganese, 0.004% to 3.5% of magnesium, cobalt 0.0001% to 0.02%, 0.0003% to 0.02% of nickel.

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 6379.1 measurement methods and results of Accuracy (trueness and precision) - Part 1. General principles and definitions Laboratory use specifications and test methods
GB/T 6682 Analysis SN/T 0736.1 fertilizer import and export inspection methods of sampling and sample preparation methods

3 Method summary

After the sample was dissolved in hydrochloric acid medium, flame atomic absorption spectrophotometer at 324.8nm, 213.9nm, 248.3nm, 279.5nm, 285.2nm, 240.7nm, 232.0nm wavelength to air - acetylene flame copper, zinc, iron, manganese, magnesium, cobalt, nickel Determination.

4 Reagents and materials

Analysis Unless otherwise stated, use only reagents of recognized analytical grade and distilled water or equivalent purity of its water, in line with GB/T 6682 Provisions.

4.1

hydrochloric acid ($\rho = 1.19\text{g/mL}$).

4.2

nitric acid ($\rho = 1.42\text{g/mL}$).

4.3

sulfate ($\rho = 1.84\text{g/mL}$).

4.4

perchloric acid ($\rho = 1.67\text{g/mL}$).

4.5

hydrochloride (11). hydrochloric acid (4.1) was diluted.

4.6

nitric acid (11). nitric acid (4.2) was diluted.

4.7

sulfate (11). in sulfuric acid (4.3) was diluted.

4.8

hydrochloride (15). hydrochloric acid (4.1) was diluted.

4.9

lanthanum chloride solution (1g/L). Weigh 0.1g of lanthanum chloride dissolved in 100mL of water.

4.10

copper standard solution 1.00mg/mL. Weigh accurately copper (more than 99.95%) 1.0000g, placed in 400mL beaker, add