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

GB/T 8570.6-2010

Replacing GB/T 8570.6-1988

**Determination of liquefied anhydrous ammonia -- Part 6: Oil
content -- Gravimetric and infra-red methods**

液体无水氨的测定方法 第6部分：油含量 重量法和红外吸收光谱法

(English Translation)

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Foreword

GB/T 8570 "Determination of liquid anhydrous ammonia method" is divided into seven parts.

- Part 1. Adoption of laboratory samples;
- Part 2. Ammonia content;
- Part 3. Residue content weight method;
- Part 4. Residual content volumetric method;
- Part 5. Moisture Fisher Fischer;
- Part 6. Oil content gravimetric and infrared absorption spectroscopy;
- Part 7. Iron content - phenanthroline spectrophotometric method.

This part is Part 6 of GB/T 8570.

This part of the replacement GB/T 8570.6-1988 "liquid anhydrous ammonia content determination of gravimetric and infrared spectroscopy." this part of the revision using ISO 7106. 1985 "industrial liquid anhydrous ammonia content of the determination of weight and infrared spectroscopy." the main differences between this part and ISO 7106. 1985 are. ISO 7106 taken sample.200 mL, this part is based on liquid anhydrous ammonia Oil content $\leq$ 5mg/kg requirements, modified to 400mL; used sulfuric acid absorption solution concentration corresponding to 1 times, 20%.

The main differences between this edition and the previous edition are.

Preparation and calibration of reagent solutions, standard titration solutions, etc. Execution of HG/T 2843 standards;

--- increase the contents of the security warning;

- standardize the standard format according to the new requirements.

This section is proposed by the China Petroleum and Chemical Industry Association.

This section is under the jurisdiction of the National Technical Committee on Standardization of Fertilizers and Soil Conditioners (SAC/TC105).

This part of the drafting unit. the National Fertilizer Quality Supervision and Inspection Center (Shanghai), the Eastern Airlines Co., Ltd. Security Department.

1 Scope

GB/T 8570 of this part of the liquid anhydrous ammonia (liquid ammonia) in about 105 °C non-volatile oil content of the two methods of determination. weight Method and infrared absorption spectroscopy.

When the oil content measured by gravimetric method is less than 5mg/kg, the test result is reported as "less than 5mg/kg" or infrared absorption Spectrophotometric method.

2 Normative reference documents

The terms of this document are the terms of this part by reference to this part of GB/T 8570. Any reference to the date of the text , All subsequent amendments (excluding corrigenda) or revisions do not apply to this part, however, encouragement under this section the parties to the agreement study whether the latest version of these documents can be used. For undated references, the latest edition of this document applies section.

GB/T 8570.1 Methods for the determination of liquid anhydrous ammonia - Part 1. Adoption of laboratory samples GB/T 8570.3-2010 Methods for the determination of liquid anhydrous ammonia - Part 3. Residue content gravimetric method Methods for the determination of anhydrous ammonia - Part 4. Residue content volumetric method GB/T HG/T 2843 chemical analysis of chemical fertilizers commonly used standard titration solution, standard solution, reagent solution and indicator solution

3 Principle

After evaporation of the liquid ammonia sample at room temperature, the oil in the residue was extracted with carbon tetrachloride. After heating to remove carbon tetrachloride, weighed and left ; Or at a fixed wavelength of about 3.42 m (corresponding to the strongest absorption band of asymmetric vibrations of the CH group), the organic matter Absorbance.

4 Reagents and materials

The following parts of the reagents and solutions are toxic or corrosive, the operator should be careful to prevent inhalation of its vapor, the skin and eye contact is strictly prohibited, such as splashing on the skin should be immediately washed with water or suitable way to deal with, if not suited to immediate medical treatment.

The reagents, solutions and water used in this part shall comply with the requirements of HG/T 2843 when not specified and formulated.

4.1

carbon tetrachloride. for infrared absorption spectrometry determination, the analysis wavelength of $3.42\mu\text{m}$ in the vicinity, should not contain the wavelength of infrared light Absorbable impurities;

4.2

sulfuric acid solution, the mass fraction of about 20%;

4.3

hydrochloric acid solution, the mass fraction of about 10%;

4.4

paraffin oil standard solution. 0.5mg/mL carbon tetrachloride solution.

Weigh 0.050g spectrum of pure paraffin oil (commonly used n-hexadecane), said quasi-0.0002g, placed in 100mL beaker, add carbon tetrachloride to about 50mL, to be dissolved, all transferred into the 100mL volumetric flask, diluted with the same carbon tetrachloride to the scale, shake;