

ICS 65.080
CCS G20



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

GB/T 10209.3-2010

Replacing GB/T 10209.3-2001

**Determination of monoammonium phosphate and diammonium
phosphate - Part 3: Water content**

磷酸一铵、磷酸二铵的测定方法 第3部分：水分

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Foreword

GB/T 10209 "monoammonium phosphate, diammonium phosphate determination method" is divided into four parts.

--- Part 1. total nitrogen content;

--- Part 2. phosphorus content;

--- Part 3. Water;

--- Part 4. granularity. This part of GB/T 10209 Part 3. This Part replaces GB/T 10209.3-2001 "monoammonium phosphate, diammonium phosphate Determination of moisture." The main difference between this version and the previous version are. The

--- Karl Fischer method to draw the test solution by volume to 10.0mL 5.0mL;

--- Increased content security warning;

--- According to the new requirements of the standard format has been rewritten. This part is proposed by the China Petroleum and Chemical Industry Association. This part of the National Standardization Technical Committee and soil conditioners Fertilizers (SAC/TC105) centralized. This section drafted by: National Fertilizer Quality Supervision and Inspection Center (Shanghai), Liuguo Chemical Corporation. The main drafters of this section. business according to Cong, yellow Feng, Zhou Yongming, Mu Yongfeng, Yang. This section first published in 1989 (GB/T 10210-1988), 2001 on the first amendment. MAP, DAP measurement method Part 3. Water

1 Scope

GB/T 10209.3-2010 is the Chinese national standard on determination of monoammonium phosphate and diammonium phosphate - part 3: water content, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 June 2010 by the

General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2011. Classification: ICS 65.080, CCS G20. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB/T 10209 provisions of this section measured monoammonium phosphate, diammonium phosphate free water by Karl Fischer method and vacuum oven method content. This section applies to all kinds of technology, the monoammonium phosphate, diammonium phosphate Determination of water content free.

2 Normative references

The following documents contain provisions which, through reference

GB/T 10209 in this section constitute provisions of this section. 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.

GB/T 6283 Determination of chemical products in the water content Karl Fischer method (General method) (GB/T 6283-2008, ISO 760. 1978, NEQ)

HG/T 2843 fertilizer products chemical analysis commonly used in standard titration solution, standard solution, reagent solution and indicator solution

3.1 Karl Fischer method (Arbitration Act)

3.1.1 Principle In a sample of free water and water of known titer of Karl Fischer reagent for quantitative reaction, reaction is as follows: $\text{H}_2\text{O} + \text{I}_2 + \text{SO}_2 + 3\text{C}_5\text{H}_5\text{N} = 2\text{C}_5\text{H}_5\text{N} \cdot \text{HI} + \text{C}_5\text{H}_5\text{N} \cdot \text{SO}_3 + \text{C}_5\text{H}_5\text{N} \cdot \text{SO}_3 + \text{CH}_3\text{OH} = \text{C}_5\text{H}_5\text{NH} \cdot \text{OSO}_2\text{OCH}_3$

3.1.2 Reagents and materials Reagents and solutions following the flammable and toxic and harmful to the human body, the operator should be careful as splashed on the skin should be washed with water immediately Wash or process suitable manner, if they feel immediate medical attention. This part of the reagent solution and water, in the specifications and method of preparation is not specified, it shall comply with the provisions of HG/T 2843's.

3.1.2.1 methanol. water content $\leq 0.05\%$, such as moisture content $> 0.05\%$, 500mL of methanol was added to the 5A molecular sieve about 50g, stuffed bottle Plug, allowed to stand overnight, to learn to use the supernatant;

3.1.2.2 dioxane. after dehydration treatment methods with 3.1.2.1;

3.1.2.3 ethanol. dehydration treatment method with 3.1.2.1;

3.1.2.4 Karl Fischer reagent; NOTE. None of pyridine Karl Fischer reagent can also be used to improve, but at the time of arbitration, only the pyridine-containing reagents. 3.1.2.5 5A molecular sieve. 3mm ~ 5mm diameter of the particles used as a desiccant. Before use 2h calcination at 500 °C contents fresh and Molecular sieve dryer cooled. Used molecular sieve can be washed with water, drying, calcination, after regeneration alternate.

3.1.3 Instruments

3.1.3.1 usual laboratory instruments;

3.1.3.2 Karl Fischer titration instruments directly electricity. according to GB/T 6283 is equipped with, or in connection with performance equivalent Karl Fischer instruments;

3.1.3.3 centrifuge. Medical, (0 ~ 4000) r/min;