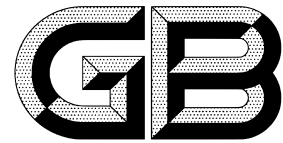


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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 11064.11-2013

Replacing GB/T 11064.11-1989

**Methods for chemical analysis of lithium carbonate, lithium
hydroxide monohydrate and lithium chloride - Part 11:
Determination of acid-insolubles content - Gravimetric method**

**碳酸锂、单水氢氧化锂、氯化锂 化学分析方法 第 11 部分：酸不溶物量的测定
重量法**

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Standardization Administration of the People's Republic of China..**

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Foreword

GB/T 11064 "Methods for chemical analysis of lithium carbonate, lithium hydroxide monohydrate and lithium chloride" is divided into 16 parts:

- Part 1: Determination of lithium carbonate content - Acid-alkali titrimetric method;
- Part 2: Determination of lithium hydroxide content - Acid-alkali titrimetric method;
- Part 3: Determination of lithium chloride content - Potentiometric method;
- Part 9: Determination of sulfate content - Barium sulfate nephelometry method;
- Part 10: Determination of chloride content - Silver chloride nephelometry method;
- Part 11: Determination of Acid-insolubles Content - Gravimetric method;
- Part 15: Determination of fluoride content - Ion selective method;

manganese, cadmium and aluminum content - Inductively coupled plasma atomic emission spectrometry.

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

This Part replaces GB/T 11064.11-1989 "Lithium carbonate, lithium hydroxide monohydrate and lithium chloride - Determination of acid-insolubles - Gravimetric method".

Compared with GB/T 11064.11-1989, the main changes of this Part are as follows:

- RE-EDIT the text format; ADD the test report.

This Part shall be under the jurisdiction of National Standardization Technical Committee of Nonferrous Metals (SAC/TC 243).

Drafting organizations of this Part: Xinjiang Wuxin Lithium Salt Development Co., Ltd., Xinjiang Research Institute of Non ferrous Metals, and Beijing General Research Institute of Mining & Metallurgy.

The main drafters of this Part: Lv Minghui, Xia Shufen, Guan Yuzhen, Feng Xianjin, and Zhu Xiangyu.

The historical version replaced by this Part is as follows:

1 Scope

This Part of GB/T 11064 specifies the determination method of acid-insolubles content in lithium carbonate, in lithium hydroxide monohydrate, and in lithium chloride.

This Part applies to the determination of acid-insolubles content in lithium carbonate, in lithium hydroxide monohydrate, and in lithium chloride. The determination range: 0.0050%~0.020%.

2 Method Summary

The sample is dissolved with hydrochloric acid. Heat it to boiling; filter it with a sand-core glass crucible. Then dry it at 105°C~110°C to constant-mass.

3 Reagents

Unless otherwise indicated, the reagent used in this Part is an analytical pure reagent, and the water used in this Part is the distilled or deionized water.

3.2 Methyl orange indicator (1g/L): weigh 0.1g of methyl orange; dissolve it in the 70°C water. Cool it down; dilute it to 100mL.

4 Instrument

4.2 Sand-core glass crucible: filter plate aperture: 5μm~15μm.

5 Samples

6 Analysis Steps

6.1 Samples

Weigh 50g of the sample, accurate to 0.01g.

6.2 Number of Determination

6.3 Blank Test

6.3.1 Place the sample (6.1) into a 600mL beaker; add 200ml of water and 1 drop of methyl orange indicator (3.2). Neutralize it with hydrochloric acid (3.1) until the solution appears in red, and to be 1mL over the volume. Heat it to boiling for 5min; then cool it down. 6.3.2 Filter it with a sand-core glass crucible (4).

7 Calculation of Analysis Results

The acid-insolubles content is calculated in mass fraction $w(\text{acid-insolubles})$, expressed in %, according to equation (1).

m – The mass of the sample, in grams (g).

The analysis results shall be expressed to three decimal places; and expressed to four decimal places if less than 0.01%.

8 Precision