

ICS 77.120.99
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**NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC
OF CHINA**

中华人民共和国国家标准

GB/T 11064.8-2013

Replace GB/T 11064.8-1989

**Methods for chemical analysis of lithium
carbonate, lithium hydroxide monohydrate and
lithium chloride -**

**Part 8: Determination of silicon content-
Molybdenum blue spectrophotometric method**

碳酸锂, 单水氢氧化锂, 氯化锂 化学分析方法

第 8 部分: 硅量的测定 钼蓝分光光度法

Issued on: November 27, 2013

Implemented on: August 01, 2014

**Issued by General Administration of Quality Supervision, Inspection
and Quarantine of the People's Republic of China;**

**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 4: Determination of potassium and sodium content - Flame atomic absorption spectrometric method
- Part 5: Determination of calcium content - Flame atomic absorption spectrometric method
- Part 6: Determination of magnesium content - Flame atomic absorption spectrometric method
- Part 7: Determination of iron content-1,10-phenanthroline spectrophotometric method
- Part 8: Determination of silicon content - Molybdenum blue spectrophotometric 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 13: Determination of aluminum content - Chromazurol S-cetylpyridine bromide spectrophotometric method
- Part 14: Determination of arsenic content - Molybdenum blue spectrophotometric method
- Part 15: Determination of Fluoride Content - Ion Selective Method
- Part 16: Determination of calcium, magnesium, copper, lead, zinc, nickel, manganese, cadmium and aluminum content - Inductively coupled plasma atomic emission spectrometry

This Part is part 8 of GB/T 11064.

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

The Part replaces GB/T 11064.8-1989 "Lithium carbonate, lithium hydroxide monohydrate and lithium chloride-Determination of silicon content-Molybdenum blue spectrophotometric method".

Compared with GB/T 11064.8-1989, the main changes of this Part are as follows:

- ADD the repeatability terms;
- 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: Sichuan Tianqi Lithium Industries Inc., Xinjiang Research Institute of Non ferrous Metals and Xinjiang Wuxin Lithium Salt Development Co., Ltd.

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The historical version replaced by this Part is as follows:

- GB/T 11064.8-1989.

Methods for chemical analysis of lithium carbonate, lithium hydroxide monohydrate and lithium chloride -

Part 8: Determination of silicon content- Molybdenum blue spectrophotometric method

1 Scope

This part of GB/T 11064 specifies the determination method of silicon content in lithium carbonate, lithium hydroxide monohydrate and lithium chloride.

The part applies to the determination of silicon content in lithium carbonate, lithium hydroxide and monohydrate and lithium chloride. The determination range: 0.000 5%~0.050%.

2 Method Summary

The sample is dissolved with hydrochloric acid. In the weak acid medium, the silicon and ammonium molybdate react to produce molybdisilicic heteropolyacid. The phosphor and arsonium can be eliminated with sulfuric acid and oxalic acid. The silico-molybdenum yellow can be reduced to silico-molybdenum blue with ascorbic acid, so that the absorbance can be determined at the 800nm wavelength of a spectrophotometer.

3 Reagents

Unless otherwise specified, the reagent used in the part is an analytical pure reagent, and the water used here is the secondary deionized water.

3.1 Hydrochloric acid (1+1), GR

3.2 Sulfuric acid (3+97), GR

3.3 Sulfuric acid (33+67), GR

3.4 Ammonia (1+5), GR, stored in plastic bottles.

3.5 Ammonium molybdate solution (50g/L), filtered if necessary, stored in plastic bottles.

3.6 Oxalic acid solution (50g/L), stored in plastic bottles.

3.7 Ascorbic acid solution (20g/L), prepared when used.

3.8 P-Nitrophenol indicator (1g/L).

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