

# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA 中华人民共和国国家标准

GB/T 11064.10-2013

Replace GB/T 11064.10-1989

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

Part 10: Determination of chloride content-Silver chloride nephelometry method

碳酸锂、单水氢氧化锂、氯化锂 化学分析方法 第 10 部分: 氯量的测定 氯化银浊度法

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# Contents

Foreword	
1 Scope	3
2 Method Summary	3
3 Reagents	4
4 Instrumentation	
5 Samples	
6 Analysis Steps	4
7 Calculation of Analysis Results	5
8 Precision	6
9 Test report	6

#### **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 10 of GB/T 11064.

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

The Part replaces GB/T 11064.10-1989 " Lithium carbonate and lithium hydroxide monohydrate-Determination of chloride content-Mercurmetric method".

Compared with GB/T 11064.10-1989, 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: Xinjiang Research Institute of Non ferrous Metals, Ganzhou Non-ferrous Metallurgy Research Institute and Sichuan Tianqi Lithium Industries Inc.

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The historical version replaced by this Part is as follows:

- GB/T 11064.10-1989.

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

# Part 10: Determination of chloride content-Silver chloride nephelometry method

### 1 Scope

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

The part applies to the determination of chloride content in lithium carbonate, lithium hydroxide and monohydrate and lithium chloride. The determination range: 0.0010%~0.10%.

# 2 Method Summary

In nitric acid media, chloride ions and silver ions produce slightly soluble silver chloride, which, during a certain period of time, is in suspension. Determine its absorbance at the 420nm wavelength of a spectrophotometer to figure out the chlorine content.

### 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 Nitric acid (1+1).
- 3.2 Nitric acid (9+16).
- 3.3 Silver nitrate solution (0.1mol/L): weigh 17.0g silver nitrate to a beaker. Add water to dissolve it. Move the mixture to a 1,000mL brown flask. Add nitric acid (3.1) to make the solution transparent. Dilute it with water to the scale, shake it up and store it in a dark place.
- 3.4 Sodium hydroxide solution (100g/L): weigh 10g sodium hydroxide to a 250mL plastic beaker. Add 100mL of decarbonated water to dissolve it, and then store it in a plastic bottle.
- 3.5 Ascorbic acid solution (25g/L), analytical reagent, prepared when used.
- 3.6 Chloride standard storage solution: weigh 1.6484g of sodium chloride (primary



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