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Translated English of Chinese Standard: GB/T11064.10-2013

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# GB

NATIONAL STANDARD OF THE  
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## GB/T 11064.10-2013

Replacing GB/T 11064.10-1989

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

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

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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 12: Determination of carbonate content - Determination of lithium chloride content - Potentiometric 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 - Mercurimetric 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 Co., Ltd.

The main drafters of this Part: Guan Yuzhen, Kang Zeyan, Ye Chunsheng, Yang Feng, Liu Hong, Gou Haixia, Luo Yuping, and Zhang Xianghong.

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, in lithium hydroxide monohydrate, and in lithium chloride.

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

#### 2 Method Summary

In nitric acid media, chloride ions and silver ions produce insoluble silver chloride. During a certain period of time, the silver chloride appears in suspension. Determine its absorbance at the 420nm wavelength of a spectrophotometer; obtain the chlorine content.

#### 3 Reagents

Unless otherwise specified, the reagent used in this Part is guaranteed reagent, and the water used in this Part 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 of silver nitrate into a beaker. Add water to dissolve it. Transfer the mixture to a 1,000mL brown flask. Drop-add nitric acid (3.1) to make the solution to be transparent. Dilute it with water to the scale; shake it up; store it in a dark place.

3.4 Sodium hydroxide solution (100g/L): weigh 10g of sodium hydroxide into a 250mL plastic beaker. Add 100mL of de-carbonated water to dissolve it; then store it in a plastic bottle.

3.5 Ascorbic acid solution (25g/L), analytical reagent, prepared when it is used.

- Sample;
- The number of this Part national standard;
- Analysis result and its expression;
- Difference with the basic analysis step;
- Anomalies observed in the determination;
- Determination date.

\_\_\_\_\_ **END** \_\_\_\_\_

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