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

GB/T 10304.1-1988

7-1988; GB/T 10304.8-1988; GB/T 10304.9-1988; GB/T 10304.10-1988; GB/T 10304.11-1988; GB/T 10304.12-1988

**Analytical method of cathode carbonate
(English Translation)**

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Foreword

This standard replaces GB/T 10304.1-1988 "General analysis of cathode carbonate", GB/T 10304.2-1988 "cathode carbonate Determination of barium content - potassium iodometric titration method ", GB/T 10304.3-1988" calcium carbonate in cathode carbonate complexation Titration ", GB/T 10304.4-1988" cathode carbonate calcium carbonate, strontium atomic absorption spectrophotometry " GB/T 10304.5-1988 "Determination of nitrate in cathode carbonate", GB/T 10304.6-1988 "cathode sodium carbonate atomic absorption Close spectrophotometric ", GB/T 10304.7-1988" Determination of acid in cathode carbonate insolubles ", GB/T 10304.8-1988" Yin Determination of iron carbonate pole ", GB/T 10304.9-1988" Determination of chlorine in cathode carbonate roots ", GB/T 10304.10-1988" Yin Pole carbonate Determination of sulfate radical ", GB/T 10304.11-1988" cathode carbonates of heavy metals (Pb) Determination " GB/T 10304.12-1988 "cathode carbonate ignition loss determination." the standard integrated and adjusted the GB/T 10304.1 ~ 10304.12-1988 applicable content, and GB/T 10304.1 ~ 10304.12-1988 compared to the main changes are as follows.

- According to GB/T 1.1-2000 and GB/T 1.2-2002, rearrange the contents of the standard;
- Added "foreword";
- Added "normative references";
- The "method Points" unified described as "principle";
- Increased thiosulfate preparation and calibration method in the determination of barium carbonate in cathode carbonate content in;
- Calcium carbonate, strontium carbonate content of calcium carbonate in the determination of Determination and cathode carbonate in cathode carbonate "in accordance with the sample Preparation of standard grades Series "is changed to" in

accordance with the expected sample grades (see GB/T 10306-1988) formulated standard series ";

--- In the determination of nitrate in cathode carbonate, and removed a redox titration.

Please note that some of the content of this standard may involve patents. The standard release mechanism should not bear the responsibility to identify these patents.

The standard proposed by China Machinery Industry Federation.

The standard measurement and control of the instruments Standardization Technical Committee Technical Committee under the jurisdiction of the national industrial processes.

1 Scope

This standard specifies the method of analysis of the cathode component content of carbonates, which analyzes projects barium strontium carbonate, calcium carbonate, nitrate, Water soluble matter (Na), the total amount of sodium, hydrochloric acid insoluble matter, iron, chloride, sulfate, heavy metals (Pb) and loss on ignition (300 °C).

This standard applies to various brands of cathode carbonate.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 10306-1988 cathode carbonate

3 General

Analytical balance scale value 3.1 should be used 0.1mg; weighing should be accurate to 0.2mg.

3.2

Test distilled water (electric conductivity is preferably not more than 2 μ S/cm).

3.3

Analysis of the reagents, except for specified levels, they were of analytical grade.

3.4

Analysis of the solution, unless otherwise indicated solvents, are the solution.

3.5

The method of so-called "constant weight" means the difference between two consecutive weighing not more than 0.2mg, cooling time should be the same every time.

3.6

standard solution concentration should be retained four significant figures.

3.7

The balance weights and capacity containers, etc., should be corrected periodically.

3.8

sample dissolution, the solution was concentrated and toxic reagent evaporation operation should be carried out in a fume hood.

4 Determination of barium carbonate in cathode carbonate content --- iodometric titration with potassium dichromate

4.1 Applicability

This method is suitable for analyzing barium content of more than 30% of cathode carbonate.

4.2 Principle

The sample is dissolved in nitric acid, in the presence of acetic acid and ammonium acetate, ammonium dichromate to make a precipitate barium, potassium iodide and then with an excess of dichromate Ammonium and generated iodine, using starch as indicator, titrated with sodium thiosulfate standard solution of free iodine, according to the consumption of standard solution of sodium thiosulfate Calculation of the sample barium carbonate content.

4.3 Reagents

4.3.1

nitric acid (1 + 1).

4.3.2

ammonia.

4.3.3

acetic acid (99%).

4.3.4

ammonium acetate solution (300g/L).

4.3.5

ammonium dichromate (200g/L).

4.3.6

hydrochloric acid (3 + 7).

4.3.7

Potassium iodide.

4.3.8

starch solution (10g/L).

4.3.9

Sodium chloride - hydrochloric acid mixed solution. Configuration 1000mL saturated solution of sodium chloride, hydrochloric acid was added 100mL and 100mL of water, and mix.