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

GB/T 13025.7-2012

Replacing GB/T 13025.7-1999

General test method in salt industry - Determination of iodine

制盐工业通用试验方法 碘的测定

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Foreword

This section of the standard method of series universal testing in salt industry, which is currently divided into the following series of standards section 13 and, if necessary, other test Standard test method will complement the development of the follow-up work.

- GB/T 13025.1 General test method in salt industry - Determination of particle size;
- GB/T 13025.2 General test method in salt industry - Determination of whiteness;
- GB/T 13025.3 General test method in salt industry - Determination of moisture content;
- GB/T 13025.4 General test method in salt industry - Determination of insoluble matter;
- GB/T 13025.5 General test method in salt industry Determination of chloride ion;
- GB/T 13025.6 General test method in salt industry - Determination of calcium and magnesium;
- GB/T 13025.7 General test method in salt industry - Determination of iodine;
- GB/T 13025.8 General test method in salt industry - Determination of sulfate;
- GB/T 13025.9 General test method in salt industry - Determination of lead;
- GB/T 13025.10 General test method in salt industry - Determination of ferrous cyanide;
- GB/T 13025.11 General test method in salt industry - Determination of Fluoride;
- GB/T 13025.12 General test method in salt industry - Determination of barium;
- GB/T 13025.13 General test method in salt industry - Determination of arsenic. This is Part 7 GB/T 13025 in. This section based on GB/T 1.1-2009 of rules for the preparation. This Part replaces GB/T 13025.7-1999 "General test method in salt industry - Determination of iodide ions", and this section GB/T 13025.7-1999 compared except editorial changes, the major technical changes are as follows:

1 Scope

GB/T 13025.7-2012 is the Chinese national standard on general test method in salt industry - determination of iodine, in the field of chemical technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 29 June 2012 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2012. Classification: ICS 71.060.50, CCS X35. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section GB/T 13025 specifies the method for determination of iodine in iodized edible salt. This section applies to direct titration add iodine salt iodization determination of iodine in salt consumption; redox titration method is suitable for Iodine Determination of iodine in salt or iodine-containing reducing material consumption; spectrophotometry for rapid determination of iodine.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated edition applies to this article Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 6682-2008 analytical laboratory use specifications and test methods

3.1 Direct titration

3.1.1 Principle In acidic medium, the sample of potassium iodate oxide deposited elemental iodine with sodium thiosulfate standard titration solution titration test Given iodine content.

$$IO_3^- + 5I^- + 6H^+ \rightarrow 3I_2 + 3H_2O$$

$$2S_2O_3^{2-} + I_2 \rightarrow 2I^- + S_4O_6^{2-}$$

3.1.2 Reagents

3.1.2.1 Reagents Specifications Unless otherwise indicated in the analysis using only recognized as analytical reagents and GB/T 6682-2008 specified tertiary water.

3.1.2.2 phosphoric acid solution (1mol/L) Measure 17mL85% phosphoric acid, diluted with water to 250mL.

3.1.2.3 potassium iodide solution (50g/L) Weigh 25.0g of potassium iodide, dissolved in water and diluted to 500mL, stored in a brown bottle, using now.

3.1.2.4 potassium iodate standard solution Accurately weigh $1.427\text{g} \pm 2^\circ\text{C}$ drying to constant weight of potassium iodate reference reagent at 110°C , placed in 150mL beaker, dissolved in water, Moved into 1000mL volumetric flask, dilute to the mark with water, shake, and this solution at a concentration of $c(16\text{KIO}_3) = 4.000 \times 10^{-2}\text{mol/L}$. The above solution was diluted 20-fold accurate to give a concentration of $c(16\text{KIO}_3) = 2.000 \times 10^{-3}\text{mol/L}$ potassium iodate standard solution.