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

GB/T 13025.9-2012

Replacing GB/T 18962-2003

General test method in salt industry - Determination of lead

制盐工业通用试验方法 铅的测定

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Foreword

This part is one of the series of standards for general testing methods for the salt industry. This series of standards is currently divided into the following 13 parts. If necessary, other tests The methodological criteria will be supplemented by follow-up work. GB/T 13025.1 General test methods for salt industry - Determination of particle size; GB/T 13025.2 General test methods for salt industry - Determination of whiteness; GB/T 13025.3 General test methods for salt industry - Determination of moisture; GB/T 13025.4 General test methods for salt industry - Determination of water insoluble matter; GB/T 13025.5 General test methods for salt industry - Determination of chloride ion; GB/T 13025.6 General test methods for salt industry - Determination of calcium and magnesium; GB/T 13025.7 General test methods for salt industry - Determination of iodine; GB/T 13025.8 General test methods for salt industry - Determination of sulfate; GB/T 13025.9 General test methods for salt industry - Determination of lead; GB/T 13025.10 General test methods for salt industry - Determination of ferrous cyanide; GB/T 13025.11 General test methods for salt industry - Determination of fluorine; GB/T 13025.12 General test methods for salt industry - Determination of barium; General test methods for salt industry - Determination of arsenic GB/T 13025.13. This part is part 9 of GB/T 13025. This part is based on the rules of GB/T 1.1-2009. This part of the GB/T 13025.9-1991 "General test method for salt industry lead ion determination (photometric method)" and GB/T 18962-2003 "General test methods for salt industry - Determination of lead ions (atomic absorption spectrophotometric method)". This part with GB/T 13025.9-1991 compared to the editorial changes in the main changes are as follows:

--- integrated flame atomic absorption spectrophotometry; - increased hydride atomic fluorescence spectrophotometry; Increased Hydride Atomic Absorption Spectrophotometry. This part of the China Light Industry Federation, the National Salt Standardization Technical Committee. This part of the drafting unit. National Hai Lake Salt Standardization Center, Qinghai Province Salt Industry Co., Ltd. This part of the main drafters. Zhao Yi, Yu Xiuling,

Wen Huaik. This part of the previous version of the release of the situation.

--- GB/T 13025.9-1991;

--- GB/T 18962-2003. General test methods for salt industry - Determination of lead

1 Scope

GB/T 13025.9-2012 is the Chinese national standard on general test method in salt industry - determination of lead, 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 part of GB/T 13025 specifies the determination of lead in salt products. This part applies to the determination of lead in salt products.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, the only dated edition applies, The latest version (including all amendments) applies to this document. Analysis of laboratory water specifications and test methods GB/T 6682-2008

3 Hydride Atomic Fluorescence Spectrophotometry

3.1 Principles Under acidic conditions, the lead in the sample reacts with sodium borohydride to form lead volatile hydride (PbH_4), which is carried by the carrier gas into quartz atomization. Heat decomposition into atomic lead, in the special lead hollow cathode lamp irradiation, the ground state lead atoms are excited to high energy state, in the deactivation back to the base State, the emission of the characteristic wavelength of fluorescence, the fluorescence intensity in the fixed conditions and lead content is proportional to, compared with the standard series of quantitative.

3.2 Reagents

3.2.1 Reagent specifications Unless otherwise stated, only the reagents identified as analytical reagents and the secondary water specified in GB/T 6682-2008 are used in the

analysis.

3.2.2 Sodium borohydride solution (15g/L)

3.00 g of sodium borohydride and

1.00 g of sodium hydroxide were weighed and dissolved in 200 mL of water.

3.2.3 Hydrochloric acid solution (1:1) Measure 250 mL of concentrated hydrochloric acid and dissolve in 250 mL of water.

3.2.4 Potassium ferricyanide solution (100g/L) Weigh 10 g of potassium ferricyanide, add water and dilute to 100 mL.

3.2.5 oxalic acid solution (20g/L) Weigh

2.0 g of oxalic acid, add water and dilute to 100 mL.

3.2.6 Hydrochloric acid solution (2:98) A solution of

10.0 mL of concentrated hydrochloric acid was dissolved in 490 mL of water. This solution is carrier liquid.