

ICS 71.060.50

CCS X35



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

GB/T 13025.11-2012

Replacing GB/T 13025.11-1994

General test method in salt industry - Determination of fluoride

制盐工业通用试验方法 氟的测定

Issued on: June 29, 2012

Implemented on: December 1, 2012

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative reference documents
- 3 Principle
- 4 Reagent
- 5 Instruments

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 11 of GB/T 13025. This part is based on the rules of GB/T 1.1-2009. This part of the GB/T 13025.11-1994 "Salt Industry General Test Method Determination of fluoride ion", this part and GB/T 13025.11-1994 compared to the main editorial changes. 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. The main drafters of this part. Tong Yunkun, Ren Qing test. This part of the previous version of the release of the situation.

--- GB/T 13025.11-1994. General test methods for salt industry - Determination of fluorine

1 Scope

GB/T 13025.11-2012 is the Chinese national standard on general test method in salt industry - determination of fluoride, 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 method for the determination of fluorine content in salt products by ion selective electrode method. This part applies to the determination of fluorine content in salt products.

2 Normative reference documents

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

3 Principle

Fluoride ion selective electrode and saturated calomel electrode into the sample solution, the potential difference between the two electrodes with the solution of fluoride ion concentration and change. The change of the change of potential and potential difference is in accordance with the Nernst equation, and the content of fluorine in the sample is determined by standard addition method.

4 Reagent

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

4.2 acetic acid - sodium acetate buffer solution Weigh 8.60g of anhydrous sodium acetate and 0.30g of sodium citrate ($\text{Na}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 2\text{H}_2\text{O}$), add water, add 1.50mL of glacial acetic acid, Diluted to 1L.

4.3 sodium fluoride standard solution

4.3.1 stock solution Weigh 1.105g at $110\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ dry to constant weight of sodium fluoride dissolved in water, into the 500mL volumetric flask, add water dilute to the scale, Shake, immediately transferred to the polyethylene plastic bottle to save. The solution

concentration is $\rho(F) =$

4.3.2 working fluid Accurately absorb 10mL of the above stock solution (4.3.1) in 100mL volumetric flask, diluted with water to the mark, shake, immediately transferred to the poly The plastic bottles are kept in plastic. The solution concentration is $\rho(F) = 100 \mu\text{g/mL}$.

5 Instruments

5.1 ion meter (or pH meter). reading error $\leq 2\text{mV}$.