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

GB/T 1549-2008

Replacing GB/T 1549-1994

**Chemical analysis methods of glass, glass marble and vitreous
fiber**

纤维玻璃化学分析方法

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Foreword

The standard reference ASTM C169-92 (2000) "soda-lime and borosilicate glass chemical analysis test methods", JIS R 3101-1995 "Sodium, calcium and magnesium silicate glass chemical analysis." This standard replaces GB/T 1549-1994 "sodium calcium aluminosilicate glass boron chemical analysis." This standard compared with GB/T 1549-1994, the main technical changes as follows:

--- Expanding the scope of application. The standard name be changed to "fiberglass chemical analysis methods," the scope of application in addition to including the original E (E) and the outer glass base (C) glass, further comprising a boron-free alkali (ECR) glass, alkali-resistant (AR) glass, high base (A) glass Glass, high silica glass, high-strength (S) glass, basalt fiber and glass wool, rock wool, slag wool, aluminum silicate fiber cotton glass state.

--- Increased manganese oxide, zirconia, lithium, antimony total, total sulfur, phosphorus pentoxide, strontium oxide, zinc oxide, ceria and barium, cadmium, Chromium, mercury, lead and test items.

--- Increased by atomic absorption spectrophotometry of total iron, calcium oxide and magnesium oxide, hydrogen peroxide spectrophotometric determination of the spectral dioxide Titanium, with fluoride ion selective electrode method, the determination of total

arsenic by inductively coupled plasma atomic emission spectrometry and other detection method.

--- Increased by inductively coupled plasma atomic emission spectrometry aluminum oxide, calcium oxide, magnesium oxide, zirconium dioxide, total iron and Titania Appendix A.

--- The original determination of ferrous oxide redox titration with potassium dichromate to phenanthroline spectrophotometry method.

--- In the method of determination of EDTA complexometric titration of calcium oxide and magnesium oxide, the only original triethanolamine to mask interfering ions Triethanolamine and hydroxylamine hydrochloride joint masking interfering ions.

--- In the gravimetric method - Silicon molybdenum blue spectrophotometric method for determination of silicon dioxide, the silicon molybdenum yellow color from the original acidity 0.10mol/L increased to 0.20mol/L; increased operating silicomolybdenum dark yellow color when, in order to eliminate interference photochemical reduction; the Silicon molybdenum yellow coloration process were also placed in a plastic cup, eliminating the interference of F-.

--- In phenanthroline morpholino spectrophotometric method to determine the total iron, increasing the use of acetic acid - sodium acetate buffer solution pH adjusting color The method to accommodate the requirements of the determination of calcium oxide content of the glass.

--- In the method of spectrophotometric determination of total arsenic in arsenic molybdenum blue spectrophotometric, the amount before the color standard colorimetric series was added dropwise a solution of potassium permanganate Dropwise to the solution to microscopic red, expanded the scope of work of the curve, and increased sample weight and volume dispensing. Please note that some of the content of this standard may involve patents, the issuing authority of this standard should not bear the responsibility to identify these patents. Appendix A of this standard is a normative appendix. The standard proposed by China Building Materials Federation. This standard by the National Standardization Technical Committee fiberglass (SAC/TC245) centralized. This standard is drafted by: Nanjing Fiberglass Research and Design Institute. Participated in the drafting of this standard. American Le Mans - Lai Perth's Beijing office, Jushi Group. The main drafters of this standard. Shad Ren, Li Yong, Wuyong Kun, Yang Chunying, Jinxue Xia, Zhang Lei, Chen Jianliang. This standard superseded standard previously issued as follows:

--- GB/T 1549-1979, GB/T 1549-1994. Methods for chemical analysis of fiber glass

1 Scope

GB/T 1549-2008 is the Chinese national standard on chemical analysis methods of glass, glass marble and vitreous fiber, in the field of textile and leather 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 30 June 2008 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 April 2009. Classification: ICS 59.100.10, CCS Q36. 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.

Where the use of this standard or commercially available dilute hydrochloric acid, nitric acid and hydrofluoric acid and other volatile acids, where sulfuric acid, nitric acid, hydrochloric acid, perchloric acid When hydrofluoric acid sample dissolution and, Where at coke potassium sulfate in the sample melting with burner, should be carried out in a fume hood. Where the use of hydrofluoric acid, sulfuric acid, nitric Should wear plastic gloves when acid, perchloric acid and other corrosive acid. This standard does not point out all possible security issues, users have the responsibility to take appropriate safety and health practices.

2 Range

This standard specifies the chemical analysis of fiber glass general rule, sample preparation and silica glass, boron oxide, total iron, nitrous oxide Iron, titanium oxide, manganese oxide, zirconium dioxide, aluminum oxide, calcium oxide, magnesium oxide, lithium oxide, sodium oxide, potassium fluoride, total arsenic, total Antimony, total sulfur, phosphorus pentoxide, strontium oxide, zinc oxide, cerium oxide and barium, cadmium, chromium, mercury, lead and determined the chemical composition of the reagent, the analysis step, Calculation and precision and so on. This standard applies to E (E and ECR), the base (C), alkali-resistant (AR), a high base (A), high silica, high strength (S), basalt, glass wool, Determination of rock wool, slag wool, cotton and other silicate glass and fibrous glass chemical composition, is also applicable to other similar chemical composition of glass chemistry Determination of components.

3 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. Preparation of

GB/T 601-2002 Chemical Reagent standard titration solution