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

GB/T 16537-2010

Replacing GB/T 16537-1996

Chemical analysis methods of fritted glaze for ceramics

陶瓷熔块釉化学分析方法

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Foreword

This standard replaces GB/T 16537-1996 "Ceramic frit glaze chemical analysis method". The main differences between this standard and GB/T 16537-1996 are as follows: - the standard structure and format should be adjusted; The scope of the analytical method is extended, and the allowable error of the analytical method is modified (the original standard table 2 and the standard table 1).

--- the general rule (see Chapter 3);

--- modified to improve the determination of alumina, zinc oxide EDTA volumetric method (the original standard Chapter 9, now Chapter 11);

--- modified to improve the determination of calcium oxide, magnesium oxide EDTA capacity method (the original standard Chapter 11, Chapter 12, now the standard Chapter 13, Chapter 14); - Added method for the determination of titanium dioxide by spectrophotometric determination of titanium dioxide (Article 15.3);

--- increased quality assurance and control (Chapter 18);

--- Added trial report (Chapter 19);

--- Added Appendix B (original standard Chapter 15). Appendix A of this standard is a normative appendix, Appendix B is an informative appendix. This standard is proposed by the China Building Materials Federation. This standard by the National Industrial Ceramics Standardization Technical Committee (SAC/TC194) centralized. The drafting of this standard. National Ceramic and Refractory Products Quality Supervision and Inspection Center, Shandong Industrial Ceramics Research and Design Institute. The main drafters of this standard. Li Heting, Liu Xiaoyi, Sun Xiaohong, Fan Chunhong, Chen Zhiwei. Methods for chemical analysis of ceramic frit glaze

1 Scope

GB/T 16537-2010 is the Chinese national standard on chemical analysis methods of fritted glaze for ceramics, in the field of glass and ceramics industries. 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 2 September 2010 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 May 2011. Classification: ICS 81.060.20, CCS Q32. 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 standard specifies the amount of silicon oxide, iron, aluminum, titanium, boron, calcium, magnesium, zinc, lead, zirconium, potassium, sodium and other elements in the ceramic frit glaze. Analytical method. This standard applies to ceramic frit glaze and chemical composition with similar chemical composition of the glaze chemical composition analysis, the effective range of determination in Table 1.

2 Normative reference documents

The terms of the following documents are hereby incorporated by reference into this standard. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this standard, however, encourage the parties to reach an agreement under this standard Whether you can use the latest version of these files. For undated references, the latest edition applies to this standard. Preparation of standard titration solution for

GB/T 601 chemical reagents Chemical analysis of zirconium - containing refractories GB/T Methods for chemical analysis of aluminosilicate refractories

GB/T 6900-2006 Methods for chemical analysis of siliceous refractories

GB/T 6901-2008 Metallurgical products - Chemical analysis - Flame atomic absorption spectrometric methods

GB/T 7728-1987 Representation and Judgment of the Rule and Limit Value of

GB/T 8170 Numbers Laboratory glass equipment - Burettes

GB/T 12805-1991 Laboratory glass instruments - Single - line capacity bottles

GB/T 12806-1991 Laboratory glass instruments - Single - line pipetting pipelines

GB/T 12808-1991 Methods for chemical analysis of clays GB/T 16399-1996

3 General rules

3.1 General provisions Unless otherwise stated, only the approved reagents and distilled water or deionized water or comparable purity of water are used in the analysis.

3.2 The number of measurements Under repeated conditions should be measured twice.

3.3 blank test Perform a blank test under reproducible conditions.

3.4 Results statement The results should be revised according to GB/T 8170, retained 2 decimal places; when the content of $< 0.10\%$ when the results retained 2 valid figures; When the contract or the relevant standard is required, the number of digits shall be revised.

3.5 Analysis of the adoption of the results When the difference between the two effective analytical values of the obtained sample is not greater than the allowable difference specified in Table 1, the arithmetic mean is taken as the final analysis Results; otherwise, additional analysis and data processing shall be carried out in accordance with the provisions of Appendix A.

4 Instruments and equipment

4.1 Analysis of balance (0.1mg).

4.2 platinum crucible or porcelain crucible (30mL).

4.3 Platinum (75 mL).