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

GB/T 4738.1-1984

Replacing GB/T 4738.1-1984; GB/T 4738.2-1984

**Test method for acid, alkaline resistance for ceramic materials
of daily use
(English Translation)**

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Table of Contents

Foreword
1 Scope
2 Normative references
4 Reagents
4.1 Sulfuric acid solution (10%)
4.2 Sodium hydroxide solution (10%)
4.3 Phenolphthalein indicator (10g/L)
4.4 Methyl orange indicator (1g/L)
5 Apparatus

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 4738.1-1984 "ceramic materials of daily acid and alkali performance measurement method (block method)" and GB/T 4738.2-1984 "ceramic materials of daily acid and alkali performance measurement method (particle method)."

This standard GB/T 4738.2-1984 based, integrated Part of GB/T 4738.1-1984, compared with GB/T 4738.2-1984 main technical changes are as follows.

- Modify the scope of the standard (see Chapter 1);
- Modify the standard principle (see Chapter 3, Chapter 1, 1984 edition);
- Modifies the concentrated sulfuric acid is sulfuric acid solution (10%) (see 41, 1984, version 3.1.);
- Modify the sample filtering (see 58, 1984 version 2.9.);
- Modify the sample after etching using a cleaning liquid indicator (see 751, 752, 1984 edition of 5.5.1, 5.5.2...);
- Modified after etching sample drying apparatus (see 7.6, 1984 edition 5.6).

The standard proposed by China National Light Industry Council.

This standard by the national daily-use ceramics Standardization Technical Committee (SAC/TC405) centralized.

This standard was drafted. People's Republic of China Exit Inspection and Quarantine Chaozhou, Guangdong Fengxi Ceramics Industry Research Institute, Shandong Zibo

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1 Scope

This standard specifies the method for determination of ceramic materials of daily acid and alkali resistance.

This standard applies to glazed, unglazed ceramic products for daily use, it does not apply to the determination of glazed ceramic ware acid and alkali resistance.

2 Normative references

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

Basic dimensions GB/T 6005-2008 Test sieves - Metal wire cloth, perforated plate and electroformed sheet mesh Principle 3 Prescribed method of preparing a sample in sulfuric acid solution (10%) or sodium hydroxide solution (10%) medium boil 1h, after etching the sample quality and the percentage ratio of the initial mass of the sample, that is, ceramic materials of daily acid (base) degrees.

4 Reagents

Unless otherwise indicated in the analysis using only recognized as analytical grade reagents and distilled or deionized water or equivalent purity.

4.1 Sulfuric acid solution (10%)

Amount of concentrated sulfuric acid 58mL, slowly inject approximately 700mL of water, cooled and diluted to 1000mL.

4.2 Sodium hydroxide solution (10%)

Weigh 100g of sodium hydroxide, dissolved in water and diluted to 1000mL.

4.3 Phenolphthalein indicator (10g/L)

Weigh 1g phenolphthalein dissolved in ethanol (95%), diluted to 100mL with ethanol (95%).

4.4 Methyl orange indicator (1g/L)

Weigh 0.1g of methyl orange, soluble in water at 70 °C, cooled, diluted to 100mL.

5 Apparatus

5.1

Balance. dividing the value of 0.0001g.

5.2

electric oven. capable of temperature control $(110 \pm 5) ^\circ\text{C}$.

5.3

Adjustable furnace. maximum power 1000W.

5.4

Serpentine condenser. Length 300mm ~ 500mm.