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

GB/T 10811-2022

Replacing GB/T 10811-2002

Under-glaze/in-glaze decoration porcelain

釉下/中彩日用瓷器

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents. This document replaces GB/T 10811-2002 Under (in)-glaze decoration porcelain.

Compared with GB/T 10811-2002, except for the structural adjustment and editorial revisions, the main technical content changes are as follows: -- The scope of application is changed (see Chapter 1; see Chapter 1 of the 2002 edition); -- The normative references are changed (see Chapter 2; see Chapter 2 of the 2002 edition); -- The product categories are changed (see Chapter 4; see Chapter 4 of the 2002 edition); -- The requirements for the resistance to thermal shock of products are changed (see 5.2; see

5.2 of the 2002 edition); -- The provisions of glaze glossiness grades are added (see 5.3); -- The technical requirements and testing methods for lead and cadmium dissolved quantity of products are deleted (see 5.3,

6.3 of the 2002 edition); -- The requirements and testing methods for resistance to microwave ovens are added (see 5.4, 6.4); -- The requirements and testing methods for resistance to "freezers to microwave ovens" are added (see 5.5, 6.5); -- The requirements and testing methods for resistance to "freezers to ovens" are added (see 5.6, 6.6); -- The requirements and testing methods for resistance to mechanical washing are added (see 5.7, 6.7); -- The requirements for rim diameter error, height error, and mass error of products are changed (see 5.8; see

5.4 of the 2002 edition); -- The technical requirements for the appearance quality of products are changed (see 5.9; see

5.5 of the 2002 edition); Under-glaze/in-glaze decoration porcelain

1 Scope

GB/T 10811-2022 is the Chinese national standard on under-glaze/in-glaze decoration porcelain, 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 15 April 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 November 2022. Classification: ICS 81.060.20, CCS Y24. 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 document specifies the product classification, technical requirements, test methods, inspection rules, packaging, marking, transportation, and storage of under-glaze and in-glaze decoration domestic porcelain. This document is applicable to domestic porcelain with under-glaze and in-glaze decoration as the main decoration methods.

2 Normative references

The following documents contain the provisions which, through normative reference in this document, constitute the essential provisions of this document. For the dated referenced documents, only the versions with the indicated dates are applicable to this document; for the undated referenced documents, only the latest version (including all the amendments) is applicable to this document.

GB/T 2828.1-2012 Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 2829-2002 Sampling procedures and tables for periodic inspection by attributes (Apply to inspection of process stability)

GB/T 3295 Standard test method for 45° specular gloss of ceramic ware

GB/T 3298 Test method for resistance to thermal shock of domestic ceramic ware

GB/T 3299 Test method for water absorption of domestic ceramicware

GB/T 3300 Standard test method for deformation measurement of domestic ceramic ware

GB/T 3301 Standard method for measurement of volume, rim diameter allowance, height allowance, weight allowance and size of defects of domestic ceramic ware

GB/T 3302 Rules of package, mark, transport and reserve for domestic ceramic ware

GB/T 3303 Terminology of defects for domestic ceramics

GB/T 5000 Terminology for domestic ceramics

GB/T 27587 Test method for the resistance to microwave heating of domestic ceramicware

GB/T 32680 Test method for mechanical dishwashing resistance of domestic ceramic ware

GB/T 34253 Test method for resistance to freezer to microwave/oven usage on domestic ceramic wares

3 Terms and definitions

The terms and definitions defined in GB/T 3303 and GB/T 5000 apply to this document.

4 Product categories

4.1 According to the purposes of the products, they are divided into dishes, bowls, cups, pots, and other utensils.

4.2 According to the specifications of the products, they are divided into small, medium-sized, large, and special types. The size range of each type is shown in Table 1.

4.3 According to the water absorption of the products, they are divided into fine porcelain, ordinary porcelain, and stone ware.

5 Technical requirements

5.1 Water absorption The water absorption of fine porcelain products shall not exceed 0.5%, the water absorption of common porcelain products shall not exceed 1.0%, and the water absorption of stoneware products shall not exceed 5.0%.

5.2 Resistance to thermal shock Small and medium-sized products shall not crack after one heat exchange between 180 °C and 20 °C; large and special products shall not crack after one heat exchange between 160 °C and 20 °C.

5.3 Glossiness It shall meet the requirements in Table 2.

5.4 Resistance to microwave ovens The heating energy shall be 72000 J. After the test according to 6.4, there shall be no cracking, no damage, and no arc generation.

5.5 Resistance to freezers to microwave ovens After the test according to 6.5, there shall be no cracking, no damage, and no arc generation.

5.6 Resistance to freezers to ovens After the test according to 6.6, there shall be no cracking and no damage.

5.7 Resistance to mechanical washing The average obtained from all observers shall not be greater than 1.

5.8 Product specification error

5.8.1 Rim diameter error The error of a rim diameter greater than 200 mm shall be within $\pm 1.0\%$, the error of a rim diameter between 60 mm~200 mm shall be within $\pm 1.5\%$, and the error of a rim diameter less than 60 mm shall be within $\pm 2.0\%$.

5.8.2 Height error The error of a height greater than 100 mm shall be within $\pm 2.0\%$, the error of a height between 30 mm~100 mm shall be within $\pm 2.5\%$, and the error of a height less than 30 mm shall be within $\pm 3.0\%$.

5.8.3 Mass error The error of small and medium-sized products shall be within $\pm 6.0\%$, and the error of large and special products shall be within $\pm 4.0\%$.

5.9 Appearance quality

5.9.1 The product shall not have defects such as fried glaze, bump, through-wall crack, and leakage.

5.9.2 The glaze color and flower surface color of a complete set of products shall be basically the same, except for special designs; the bottom edge of the product shall be smooth, and it shall be stable when placed on a plane; the lid of the product with a lid basically coincides with the mouth; when a pot is tilted and its bottom is at an angle of 70° to the horizontal position, the lid of the pot shall not fall off; when the lid moves to one side, the gap between the lid and the mouth shall not exceed

3.0 mm; and the mouth of the spout shall not be lower than the mouth of the pot by

5.9.3 The appearance defects of each grade of products shall meet the requirements in Table 3, and there shall be no more than 2 defects within 10 mm^2 , and the following requirements shall be met:

- a) There shall be no more than 2 kinds of defects for each superior product;
- b) There shall be no more than 4 kinds of defects for each first-class product;