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INTERNATIONAL STANDARD



1775

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## Porcelain laboratory apparatus — Requirements and methods of test

*Appareils de laboratoire en porcelaine — Spécifications et méthodes d'essai*

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## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 48 has reviewed ISO Recommendation R 1775 and found it technically suitable for transformation. International Standard ISO 1775 therefore replaces ISO Recommendation R 1775-1970 to which it is technically identical.

ISO Recommendation R 1775 was approved by the Member Bodies of the following countries :

|                     |             |                       |
|---------------------|-------------|-----------------------|
| Austria             | India       | South Africa, Rep. of |
| Belgium             | Iran        | Spain                 |
| Canada              | Ireland     | Thailand              |
| Colombia            | Israel      | Turkey                |
| Czechoslovakia      | Italy       | United Kingdom        |
| Egypt, Arab Rep. of | Netherlands | U.S.A.                |
| France              | New Zealand | U.S.S.R.              |
| Germany             | Peru        | Yugoslavia            |
| Greece              | Poland      |                       |

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 1775 into an International Standard.

# Porcelain laboratory apparatus — Requirements and methods of test

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies requirements for a quality of porcelain suitable for all types of porcelain laboratory apparatus (including microchemical apparatus) and describes appropriate methods of test.

NOTE — Some of the tests specified should, for convenience, be carried out only on the articles mentioned, the results being accepted as generally applicable to all articles manufactured under similar conditions from the same batch of material.

## 2 SAMPLING

The whole articles or pieces of porcelain apparatus selected for the tests shall be representative of the batch or consignment as a whole. The selection should preferably be made by application of a standard sampling procedure, agreed between the parties to the tests.

## 3 POROSITY

When tested by the method described in annex A, the porcelain shall not show staining as defined in A.4.1.

## 4 GLAZE

When tested by the method described in annex A, the glaze of the porcelain shall not show crazing or other defects as defined in A.4.2.

## 5 RESISTANCE TO HEAT AND SUDDEN CHANGE OF TEMPERATURE

When quenched from a temperature of 230 °C above ambient temperature, in the manner described in annex B,

the porcelain shall not break, crack or show crazing as defined in B.4.

## 6 RESISTANCE OF GLAZE TO HIGH TEMPERATURE

When tested by the method described in annex C, the glaze of the porcelain shall not show softening as defined in C.3.

## 7 CONSTANCY OF MASS ON IGNITION

When tested by the method described in annex D, the porcelain shall not vary in mass by more than 0,1 mg per 10 g of total mass.

## 8 RESISTANCE OF GLAZE TO ACID OR ALKALI

When tested by the method described in annex E, the porcelain shall not show losses in mass greater than the following amounts :

### a) Hydrochloric acid test

0,01 mg per square centimetre of the total inner surface of the vessel.

### b) Sodium carbonate test

0,1 mg per square centimetre of the surface covered by the liquid.

### c) Sodium hydroxide test

0,6 mg per square centimetre of the surface covered by the liquid.