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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

# ISO RECOMMENDATION R 1775

PORCELAIN LABORATORY APPARATUS

QUALITY AND METHODS OF TEST

1st EDITION

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## BRIEF HISTORY

The ISO Recommendation R 1775, *Porcelain laboratory apparatus – Quality and methods of test*, was drawn up by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1775, which was circulated to all the ISO Member Bodies for enquiry in December 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

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

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

## PORCELAIN LABORATORY APPARATUS

### QUALITY AND METHODS OF TEST

#### 1. SCOPE

This ISO Recommendation 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 should 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 should not show staining as defined in clause A.4.

#### 4. GLAZE

When tested by the method described in Annex A, the glaze of the porcelain should not show crazing or other defects as defined in clause A.5.

#### 5. RESISTANCE TO HEAT AND SUDDEN CHANGE OF TEMPERATURE

When quenched from a temperature of 230 degrees Celsius above ambient temperature, in the manner described in Annex B, the porcelain should not break, crack or show crazing as defined in clause B.4.

#### 6. RESISTANCE OF GLAZE TO HIGH TEMPERATURE

When tested by the method described in Annex C, the glaze of the porcelain should not show softening as defined in clause C.3.

#### 7. CONSTANCY OF MASS ON IGNITION

When tested by the method described in Annex D, the porcelain should 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 methods described in Annex E, the porcelain should 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.