INTERNATIONAL STANDARD 2466

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Potassium hydroxide for industrial use — Sampling — Test sample — Preparation of the main solution for carrying out certain determinations

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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.

International Standard ISO 2466 was drawn up by Technical Committee ISO/TC 47, *Chemistry*, and circulated to the Member Bodies in August 1971.

It has been approved by the Member Bodies of the following countries :

Austria	India	Romania
Belgium	Ireland	South Africa, Rep. of
Chile	Israel	Spain
Czechoslovakia	Italy	Sweden
Egypt, Arab Rep. of	Netherlands	Switzerland
France	New Zealand	Thailand
Germany	Poland	United Kingdom
Hungary	Portugal	U.S.S.R.

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendations R 988-1969, *Potassium hydroxide for industrial use — Preparation and storage of test sample,* and R 989-1969, *Potassium hydroxide for industrial use — Preparation of sample solution.*

Potassium hydroxide for industrial use — Sampling — Test sample — Preparation of the main solution for carrying out certain determinations

1 SCOPE AND FIELD OF APPLICATION

This International Standard provides certain indications relating to the sampling of quantities of potassium hydroxide, indicates the conditions under which the test sample should be prepared, and describes a method for the preparation of the main solution to be used for carrying out certain determinations.

2 LABORATORY SAMPLE

2.1 The particular properties of potassium hydroxide which make special precautions essential should be stressed : hygroscopic characteristics, ability to absorb carbon dioxide, corrosive action on containers. These properties make it necessary that :

- samples shall be taken rapidly in a dry atmosphere;
- the laboratory sample shall be stored in an airtight bottle, protected from contact with the atmosphere;
- the bottle shall be made of a made of a material that does not contaminate the sample with the elements to be determined (for example, a silica-free material such as polyethylene, if the determination of silica content is intended).

2.2 For the methods of sampling, and the number of portions to be drawn from a given quantity, see ISO . . .[1)].

3 TEST SAMPLE

3.1 The laboratory sample shall be protected from the atmosphere and handled in such a way that no appreciable absorption of moisture or carbon dioxide is possible during the operations.

Crushing or grinding in a mortar, if necessary, shall be carried out in the minimum time, in an atmosphere as dry as possible.

It is recommended that these operations should be carried out in a "glove box" fitted with gauntlets, from which moisture and carbon dioxide have been removed by the introduction, at least 1 h before the sample is treated, of flat dishes containing phosphorus pentoxide and potassium hydroxide pellets.

3.2 Take about 300 g of the laboratory sample and, in the case of a solid product, grind it, if necessary, to ensure that the largest dimension of the pieces does not exceed about 6 mm. Place the sample in an airtight container, composed of a material that does not contaminate the product with the elements to be determined and of such a capacity that it is almost completely filled.

The containers shall bear a label, with protective coating, indicating :

- the origin and identification of the test sample;
- the date on which it was placed in the container.

4 PREPARATION OF THE MAIN SOLUTION FOR CARRYING OUT CERTAIN DETERMINATIONS (SOLUTION A)

4.1 Test portion

In a weighing bottle fitted with a ground lid, weigh, to the nearest 0,01 g, a mass of the solid or liquid test sample corresponding to approximately 50 g of KOH.

1) In preparation.

4.2 Reagent

Distilled water, or water of equivalent purity, shall be used.

4.3 Preparation of the main solution A

4.3.1 *Solid product*

Dissolve the test portion (4.1) in about 200 ml of water. Cool to room temperature and transfer the solution quantitatively to a 1 000 ml one-mark volumetric flask, dilute almost to the mark, cool again to room temperature, dilute to the mark and mix.

4.3.2 *Liquid product*

Transfer the test portion (4.1) directly and quantitatively to a 1 000 ml one-mark volumetric flask, dilute almost to the mark, cool to room temperature, dilute to the mark and mix.

NOTE – If it is intended also to determine the silica content, dissolve the test portion in a container of silica-free material (for example, polyethylene or silver). In the case of a polyethylene container, cool the outer walls with running water. After dilution to the mark in a 1 000 ml one-mark volumetric flask, transfer the solution to a dry polyethylene bottle with an airtight closure.