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BRITISH STANDARD

BS 6075-5:
1981
ISO 3195:1975

Methods of

Sampling and test for sodium hydroxide for industrial use —

Part 5: Sampling and preparation of main test solution

[ISO title: Sodium hydroxide for industrial use — Sampling — Test sample — Preparation of the main solution for carrying out certain determinations]

NOTE It is recommended that this Part be read in conjunction with the information in the *"General introduction"* published separately as BS 6075-0.

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National foreword

This Part of BS 6075 is identical with ISO 3195 "*Sodium hydroxide for industrial use — Sampling — Test sample — Preparation of the main solution for carrying out certain determinations*", published in 1975 by the International Organization for Standardization (ISO).

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used throughout as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, page 1 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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1 Scope and field of application

This International Standard gives instructions relating to the sampling of consignments of sodium hydroxide, indicates the conditions under which the test sample shall be prepared, and specifies a method for the preparation of the main solution which will be used for carrying out certain determinations.

2 Laboratory sample

2.1 The properties of sodium hydroxide make particular precautions essential: its hygroscopic characteristics, its ability to absorb carbon dioxide and its 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 material which 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 water or carbon dioxide is possible during the operations.

Crushing or grinding in a mortar, if necessary, shall be carried out as rapidly as possible in an atmosphere of maximum dryness.

It is recommended that these operations should be carried out in a glove box from which moisture and carbon dioxide have been removed by the introduction, at least 1 h before the sample is treated, of flat dishes, one containing phosphorus(V) oxide and another 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 greatest dimension of the particles does not exceed about 6 mm. Place the sample in an airtight container made of a material which will not contaminate the sample with the elements to be determined, and which is of such a capacity that it is almost completely filled.

The container shall bear a label, with a 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 glass 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 a little less than 40 g of NaOH.

4.2 Reagent

Distilled carbonate-free water, or water of equivalent purity, shall be used.

4.3 Procedure [Preparation of the main solution (A)]

4.3.1 ***Solid Products***

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, complete the dilution to the mark, and mix.

4.3.2 ***Liquid products***

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

NOTE If the silica content is to be determined, dissolve the test portion in a container made of silica-free material (for example, polyethylene or silver). In the case of a polyethylene container, cool the outer walls with running water in order to prevent softening. After the 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.

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[1] In preparation.

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