

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION MET MET APODITAR OPTAHUSALUN TO CTAHDAPTUSALUN.ORGANISATION INTERNATIONALE DE NORMALISATION

Surface active agents – Determination of pH of aqueous solutions – Potentiometric method

Agents de surface - Détermination du pH des solutions aqueuses - Méthode potentiométrique

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FOREWORD

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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. S

International Standard ISO 4316 was developed by Technical Committee ISO/TC 91, *Surface active agents,* and was circulated to the member bodies in August 1975.

It has been approved by the member bodies of the following co

Australia Austria Belgium Brazil Canada Egypt, Arab Rep. of France Germany Hungary

India Iran Italy Netherlands New Zealand Poland Portugal Romania South Africa, Rep. of Spain Switzerl Thailand Turkey United Kingd U.S.A. Yugoslavia

The of th The member body of the following country expressed disapproval of the document on technical grounds :

Japan

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Surface active agents – Determination of pH of aqueous solutions – Potentiometric method



1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the pH of approximations of surface active agents.

This method is applicable only if so indicated in the specific standard for each product.

2 REFERENCE

ISO 607, Surface active agents – Detergents – **Methods** of sample division.¹⁾

3 PRINCIPLE

Potentiometric measurement of the potential difference between a glass electrode and a reference electrode dipping in an aqueous solution of the surface active agent.

4 REAGENTS

4.1 Distilled water, free from carbon dioxide and protected from its absorption.

4.2 Standard buffer solutions.

Two standard buffer solutions, chosen from those commonly used, are necessary to calibrate the pH meter. Their pH values should, if possible, be on either side of the expected pH of the test solution but, if not, one should not differ from the expected pH by more than 1 pH unit.

5 APPARATUS

5.1 pH meter, including a temperature compensation system, and graduated in 0,1 pH unit.

5.2 Glass electrode.

5.3 Electrode, calomel/saturated potassium chloride type.

5.4 Combined electrode, as an alternative to the glass electrode (5.2) and reference electrode (5.3).

6 SAMPLING

The laboratory sample of the surface active agent shall be prepared and stored according to the instructions given in ISO 607.

7 PROCEDURE

7.1 Test portion

Weigh, to the nearest 0,01 g, approximately 10 g of the laboratory sample.

7.2 Determination

7.0 Preparation of the test solution

The preparation and the concentration of the test solution from the test portion (7.1) shall be indicated in the specific standard for each product.

7.2.2 Calibration

Calibrate the phoneter (5.1) according to the manufacturer's instructions, using the two standard buffer solutions (4.2) chosen, at the temperature specified in 7.2.3.

7.2.3 pH measurement

For all measurements, the temperatures of the electrodes, of the water used for washing and of the standard buffer solutions or the test solutions, shall be adjusted to 20 ± 1 °C and should be as close to each other as possible. These temperatures shall not differ by more than 1 °C.

¹⁾ In preparation. (Revision of ISO/R 607.)