

INTERNATIONAL STANDARD

**ISO
6842**

Second edition
1989-10-01

Surface active agents — Sulfated ethoxylated alcohols and alkylphenols — Determination of total active matter content

*Agents de surface — Sulfates d'alcools et d'alkylphénols éthoxylés —
Détermination de la teneur en matière active totale*



Reference number
ISO 6842 : 1989 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6842 was prepared by Technical Committee ISO/TC 91, *Surface active agents*.

This second edition cancels and replaces the first edition (ISO 6842 : 1982) of which it constitutes a minor revision.

Surface active agents — Sulfated ethoxylated alcohols and alkylphenols — Determination of total active matter content

1 Scope

This International Standard specifies a method for the determination of the total active matter present in ordinary commercial neutralized products of sulfation of ethoxylated alcohols or alkylphenols [alkyl oxyethylene sulfates (ethoxylated alcohol sulfates) or alkylphenol oxyethylene sulfates (ethoxylated alkylphenol sulfates)].

The total active matter comprises the organic material soluble in ethanol (alkylether sulfates, alkylphenylether sulfates, polyglycol sulfates and non-ionic fractions).

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 607 : 1980, *Surface active agents and detergents — Methods of sample division*.

3 Principle

Boiling, under reflux, of a test portion with ethanol in the presence of sodium sulfate. Filtration, evaporation of the filtrate and weighing of the residue. Determination of any sodium chloride present, by dissolution of the residue in aqueous acetone and titration with standard volumetric silver nitrate solution. Correction of the mass of the residue for the sodium chloride content.

4 Reagents

During the analysis, use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

4.1 Ethanol, 99 % (V/V).

4.2 Dichloromethane.

4.3 Sodium sulfate, anhydrous.

4.4 Acetone, 50 % (V/V) aqueous solution.

4.5 Silver nitrate, standard volumetric solution, $c(\text{AgNO}_3) = 0,1 \text{ mol/l}$.

4.6 Potassium chromate, 100 g/l indicator solution.

5 Apparatus

Ordinary laboratory apparatus and:

5.1 Conical flask, of capacity 250 ml, with a ground glass neck.

5.2 Rotary evaporator, with round-bottomed flasks of capacity 250 ml.

5.3 Condenser, to fit the conical flask (5.1).

6 Sampling

The laboratory sample of surface active agent shall be prepared and stored in accordance with the requirements of ISO 607.

7 Procedure

7.1 Test portion

From the laboratory sample, rendered homogeneous (if necessary) by the addition of a known, appropriate quantity of water, weigh, to the nearest 1 mg, into the conical flask (5.1) a quantity of homogeneous material containing about 0,5 g to 1,5 g of total active matter.

7.2 Determination

Introduce into the conical flask containing the test portion (7.1) 100 ml of ethanol (4.1) and 100 mg of sodium sulfate (4.3), fit the condenser (5.3), and boil under reflux for 30 min.