INTERNATIONAL STANDARD 457

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Soaps — Determination of chloride content — Titrimetric method

Savons — Dosage des chlorures — Méthode titrimétrique

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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.

International Standard ISO 457 was drawn up by Technical Committee ISO/TC 91, *Surface active agents,* and circulated to the Member Bodies in December 1974.

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

Australia	India	Romania
Austria	Iran	South Africa, Rep. of
Belgium	Japan	Spain
Chile	Netherlands	Switzerland
Denmark	New Zealand	Turkey
Germany	Poland	United Kingdom
Hungary	Portugal	Yugoslavia

The Member Body of the following country expressed disapproval of the document on technical grounds :

France

This International Standard cancels and replaces ISO Recommendation R 457-1965, of which it constitutes a technical revision.

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Soaps — Determination of chloride content — Titrimetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for determining the chloride content of commercial soaps, excluding compounded products; this method is applicable to soaps having a chloride content, expressed as sodium chloride, equal to or greater than 0,1 % (*m/m*).[1)]

2 REFERENCE

ISO . . ., *Soaps — Sampling.*[2)]

3 PRINCIPLE

Removal of the fatty acids by precipitation as their calcium salts and filtration, then determination of the chloride content in the filtrate by argentimetric titration.

4 REAGENTS

During the analysis, use only reagents of recognized analytical reagent quality and only distilled water or water of at least equivalent purity.

4.1 Nitric acid, ρ 1,42 g/ml, about 70 to 80 % (*m/m*) solution, previously boiled until colourless.

4.2 Calcium nitrate, 200 g/l solution.

Dissolve 20 g of anhydrous calcium nitrate [$Ca(NO_3)_2$], or an equivalent mass of the hydrated salt, in water and dilute to 100 ml.

4.3 Ammonium iron(III) sulphate, about 10 % (*m/m*) solution.

4.4 Ammonium thiocyanate, approximately 0,1 N standard volumetric solution.

4.5 Silver nitrate, approximately 0,1 N standard volumetric solution.

5 APPARATUS

Ordinary laboratory apparatus, and in particular :

5.1 Beaker, capacity 100 ml, tall form, complying with ISO 3819.

5.2 One-mark volumetric flask, capacity 200 ml, complying with ISO 1042.

5.3 Boiling water bath.

6 SAMPLING

Laboratory samples of soaps shall be prepared and stored according to the procedure specified in ISO . . .

7 PROCEDURE

7.1 Test portion

Weigh, to the nearest 0,01 g, approximately 5 g of the laboratory sample into the beaker (5.1).

7.2 Determination

Dissolve the test portion (7.1) in 50 ml of hot water. Add 5 ml of the calcium nitrate solution (4.2), mix thoroughly, cool and filter through a high-speed filter paper into the one-mark volumetric flask (5.2). Wash the filter free from chlorides with small portions of water, allowing the washings to run into the flask. Verify the absence of chlorides from the filtrate as follows : collect a small portion of the washings in a beaker, acidify with 1 drop of the nitric acid solution (4.1) and add 1 drop of the standard volumetric silver nitrate solution (4.5). The resulting solution shall show no opalescence, turbidity or precipitate.

To the filtrate in the flask, add 5 ml of the nitric acid solution and immediately add 25,0 ml of the standard volumetric silver nitrate solution.

1) The potentiometric method specified in ISO 4323 can be used for products having a chlorides content, expressed as sodium chloride, higher or lower than 0,1 % (*m/m*).

2) In preparation.