International Standard 757/1

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Acetone for industrial use — Methods of test — Part 1 : General

Acétone à usage industriel — Méthodes d'essai — Partie 1 : Généralités

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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 757/1 was developed by Technical Committee ISO/TC 47, *Chemistry*, and was circulated to the member bodies in December 1980.

It has been approved by the member bodies of the following countries :

Australia	India	Portugal
Austria	Ireland	Romania
Belgium	Italy	South Africa, Rep. of
China	Korea, Dem.P.Rep. of	Switzerland
Czechoslovakia	Korea, Rep. of	Thailand
Egypt, Arab Rep. of	Mexico	United Kingdom
France	Netherlands	USSR
Germany, F.R.	Philippines	
Hungary	Poland	

No member body expressed disapproval of the document.

This International Standard has also been approved by the International Union of Pure and Applied Chemistry (IUPAC).

International Standards ISO 757/1 to ISO 757/5 cancel and replace ISO Recommendation R 757-1968, of which they constitute a technical revision.

Printed in Switzerland

Acetone for industrial use — Methods of test — Part 1 : General

1 Scope and field of application

This part of ISO 757 gives general instructions relating to methods of test for acetone for industrial use.

It also specifies the methods to be used for the determination of density at 20 °C, the determination of dry residue after evaporation on a water bath, the measurement of colour, the determination of distillation range and the determination of water content.

A list of the parts comprising ISO 757 is given in the annex.

2 References

ISO 758, *Liquid chemical products for industrial use — Determination of density at 20 °C.*

ISO 759, *Volatile organic liquids for industrial use — Determination of dry residue after evaporation on a water bath — General method.*

ISO 760, *Determination of water — Karl Fischer method (General method).*

ISO 918, *Volatile organic liquids for industrial use — Determination of distillation yield — General method.*[1]

ISO 2211, *Liquid chemical products — Measurement of colour in Hazen units (platinum-cobalt scale).*

3 Sampling[2]

Store the laboratory sample in a clean, dry, airtight, bottle fitted with a ground glass stopper, or in a bottle fitted with a screw-cap with an airtight polyethylene seal, of such a size that it is nearly completely filled by the sample. If it is necessary to seal the bottle, take care to avoid any contamination of the contents.

Store the sample in a cool place in the dark.

NOTE — A sample of not less than 1 000 ml is necessary for performing the series of tests specified for the product.

4 Determination of density at 20 °C

Use the method specified in ISO 758.

5 Determination of dry residue after evaporation on a water bath

Use the method specified in ISO 759.

6 Measurement of colour

Use the method specified in ISO 2211.

7 Determination of distillation yield

Use the method specified in ISO 918, subject to the following modifications appropriate for acetone.

7.1 Thermometer, complying with the requirements of ISO 918, sub-clause 5.1.2, and suitable for measuring temperatures in the range 24 to 78 °C.

7.2 Corrections to be applied to temperatures

If the corrected barometric pressure deviates from 1 013 mbar[3], apply a correction to the observed temperature by substracting 0,029 °C for every millibar above, or adding 0,029 °C for every millibar below, 1 013 mbar (see ISO 918, clause 9).

8 Determination of water content

Use one of the methods specified in ISO 760.

During the determination (see ISO 760, sub-clauses 6.2.2 or 7.2.2 or 8.2.3), use a volume of pyridine (4.3) equal to five times the volume V_0, in millilitres, of the test portion instead of 25 ml of the methanol (4.1).

1) At present at the stage of draft. (Revision of ISO/R 918.)

2) The sampling of liquid chemical products for industrial use will form the subject of a future International Standard.

3) 1 bar = 100 kPa

9 Test report

The test report, for each determination, shall contain the following particulars :

a) an identification of the sample;

b) the reference of the method used;

c) the results and the method of expression used;

d) any unusual features noted during the determination;

e) any operation not included in the appropriate part of ISO 757 or in the other International Standards to which reference is made, or regarded as optional.

Annex

ISO publications relating to acetone for industrial use

ISO 757/1 — General.

ISO 757/2 — Determination of acidity to phenolphthalein — Titrimetric method.

ISO 757/3 — Test for miscibility with water.

ISO 757/4 — Permanganate test (limit test).

ISO 757/5 — Control test with Agulhon's reagent.