International Standard 757/4

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Acetone for industrial use — Methods of test — Part 4 : Determination of permanganate time

Acétone à usage industriel — Méthodes d'essai — Partie 4 : Détermination du temps de permanganate

First edition — 1983-12-15

UDC 661.724.4 : 543.41 **Ref. No. ISO 757/4-1983 (E)**

Descriptors : industrial products, acetone, tests.

Price based on 2 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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 757/4 was developed by Technical Committee ISO/TC 47, *Chemistry*, and was circulated to the member bodies in April 1983.

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

Australia	Hungary	Romania
Austria	India	South Africa, Rep. of
Belgium	Italy	Switzerland
China	Korea, dem. P. Rep. of	Thailand
Czechoslovakia	Netherlands	United Kingdom
France	Nigeria	USSR
Germany, F.R.	Poland	

No member body expressed disapproval of the document.

Printed in Switzerland

Acetone for industrial use — Methods of test — Part 4 : Determination of permanganate time

1 Scope and field of application

This part of ISO 757 specifies a method for the determination of the permanganate time of acetone for industrial use.

This document should be read in conjunction with ISO 757/1 (see the annex).

2 Definition

For the purpose of this part of ISO 757, the following definition applies.

permanganate time : The number of minutes required, after adding 2 ml of 0,2 g/l potassium permanganate solution to 50 ml of the sample, for the colour to match that of a colour standard.

3 Principle

Addition to a test portion, under specified conditions, of potassium permanganate solution. Determination of the time taken for the colour of this test solution to match that of a cobalt(II) chloride and uranyl nitrate colour standard.

4 Reagents

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

4.1 Potassium permanganate, 0,2 g/l solution.

Use water previously boiled for 30 min with sufficient dilute potassium permanganate solution to give a stable faint pink coloration. Cool the water to ambient temperature before preparation of the solution.

Prepare this solution immediately before use and protect it from strong daylight.

4.2 Cobalt(II) chloride uranyl nitrate, colour standard.

To 5 ml of a 50 g/l of cobalt(II) chloride hexahydrate ($CoCl_2.6H_2O$), add 7 ml of a 40 g/l solution of uranyl nitrate hexahydrate [$UO_2(NO_3)_2.6H_2O$], and dilute with water to 50 ml.

Prepare this solution on the day of use.

5 Apparatus

NOTE — Clean the glassware used so as to avoid any risk of contamination.

Ordinary laboratory apparatus, and

5.1 Water bath, capable of being controlled at 25 ± 0,2 °C.

5.2 Two matched cylinders, of capacity 100 ml, of colourless transparent glass, with a mark at 50 ml and fitted with ground glass stoppers.

5.3 Burette, of capacity 10 ml, graduated in 0,05 ml divisions.

6 Procedure

6.1 Test portion

Carry out the test as soon as possible after receipt of the sample. (Instructions for the storage of the sample are specified in ISO 757/1.)

Rinse one of the cylinders (5.2), first with 15 to 20 ml of hydrochloric acid, ϱ approximately 1,19 g/ml, about 38 % (m/m) solution, then six times with tap water, twice with distilled water and finally with some of the laboratory sample.

Immediately fill the cylinder to the mark with more of the laboratory sample at a temperature of about 25 °C.