International Standard 1843/8

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Higher alcohols for industrial use — Methods of test — Part 8 : Sulphuric acid colour test

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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 1843/8 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	New Zealand	USSR
Germany, F. R.	Philippines	
Hungary	Poland	

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

Netherlands

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

This International Standard cancels and replaces ISO Recommendation R 1852-1970, of which it constitutes a technical revision.

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Higher alcohols for industrial use — Methods of test — Part 8 : Sulphuric acid colour test

1 Scope and field of application

This part of ISO 1843 specifies a procedure for a sulphuric acid colour test on C_6 to C_{13} saturated alcohols for industrial use.

This document should be read in conjunction with ISO 1843/1 (see the annex).

2 Reference

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

3 Principle

Treatment of a test portion with sulphuric acid solution, under specified conditions, and comparison of the colour developed with that of the same volume of an agreed colour standard.

NOTE — The colour developed may be measured in Hazen units, in which case the method specified in ISO 2211 should be used.

4 Reagents

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

4.1 Sulphuric acid, ϱ 1,84 g/ml, about 96 % (*m*/*m*) solution.

NOTE — Take care to control the density.

4.2 Ethanol, 95 % (*V*/*V*).

5 Apparatus

Ordinary laboratory apparatus and

5.1 Round-bottomed flask, of capacity 250 ml, of borosilicate glass fitted, with a ground glass stopper.

5.2 Burette, of capacity 10 ml, capable of delivering 8 ml of the sulphuric acid solution (4.1) at the rate of 2 drops per second at ambient temperature.

5.3 Two matched Nessler cylinders, of capacity 100 ml.

5.4 Ice-water bath.

5.5 Boiling water bath, maintained at a temperature of 99 to 100 °C.

6 Procedure

6.1 Cleaning of the apparatus

WARNING — Attention is drawn to the hazards associated with mixing water and concentrated sulphuric acid solutions.

Carefully clean the flask (5.1), the Nessler cylinders (5.3), a 100 ml graduated cylinder and a 100 ml beaker with the sulphuric acid solution (4.1). Drain thoroughly and rinse carefully in running water. Rinse with distilled water and then with the ethanol (4.2). Dry thoroughly in a gentle stream of clean, dry air.

6.2 Test portion

Using the cleaned graduated cylinder (see 6.1) take 100 ml of the laboratory sample.

6.3 Preparation of colour standard

Prepare the agreed colour standard.

NOTE — If it has been agreed to carry out the measurement of the colour developed in Hazen units, prepare the standard colorimetric solutions in accordance with ISO 2211, clause 6.

6.4 Test

Rinse the flask (5.1) with some of the laboratory sample and drain well. Place the test portion (6.2) in the flask and cool for exactly 5 min in the ice-water bath (5.4). Keeping the flask immersed in the ice-water bath, immediately start adding from the burette (5.2), at the rate of 2 drops per second, 8,0 ml of the sulphuric acid solution (4.1). During this addition, stir the contents of the flask vigorously and continuously by means of an electrically-driven glass stirrer. Ensure that the temperature of the liquid in the flask does not exceed 20 °C. When the addition is complete, stopper the flask and immediately immerse