

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 847

PHOSPHORIC ACID FOR INDUSTRIAL USE
DETERMINATION OF SULPHATE CONTENT

Volumetric method

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 847, *Phosphoric acid for industrial use – Determination of sulphate content – Volumetric method*, was drawn up by Technical Committee ISO/TC 47, *Chemistry*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question by the Technical Committee began in 1960 and led, in 1966, to the adoption of a Draft ISO Recommendation.

In December 1966, this Draft ISO Recommendation (No. 1108) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	Israel	Spain
Belgium	Italy	Switzerland
Brazil	Japan	Thailand
Bulgaria	Korea, Dem. P.R. of	Turkey
Chile	Korea, Rep. of	U.A.R.
Czechoslovakia	New Zealand	U.S.S.R.
Germany	Poland	Yugoslavia
Hungary	Romania	
India	South Africa, Rep. of	

Two Member Bodies opposed the approval of the Draft :

France
United Kingdom

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in October 1968, to accept it as an ISO RECOMMENDATION.

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DETERMINATION OF SULPHATE CONTENT

Volumetric method

1. SCOPE

This ISO Recommendation describes a volumetric method for the determination of the sulphate content in phosphoric acid for industrial use.

2. FIELD OF APPLICATION

The general method is applicable to the determination of the sulphate content in phosphoric acid for industrial use greater than 0.30 % (m/m) of H_2SO_4 content.

2.1 Special case

Phosphoric acid for industrial use containing polyphosphoric acids (see section 8).

NOTE. — In case there is no certainty of absence of polyphosphoric acids, carry out the determination according to the procedure of the special case directly.

3. PRINCIPLE

Separation of SO_4^{2-} ions as benzidine sulphate. Alkalimetric titration, in the presence of phenolphthalein, as indicator, of the sulphuric acid evolved by hydrolysis.

4. REAGENTS

Distilled water or water of equivalent purity should be used in the test.

4.1 *Potassium carbonate, anhydrous.*

4.2 *Hydrochloric acid, approximately $d = 1.19$, 37 % (m/m) or 12 N solution.*