

ISO

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 904

HYDROCHLORIC ACID FOR INDUSTRIAL USE

DETERMINATION OF TOTAL ACIDITY

Volumetric method

1st EDITION
December 1968

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BRIEF HISTORY

The ISO Recommendation R 904, *Hydrochloric acid for industrial use – Determination of total acidity – 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).

Based on detailed work on this question carried out by the Technical Committee, a Draft ISO Recommendation was adopted in 1965.

In June 1967, this Draft ISO Recommendation (No. 1174) 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	Iran	South Africa, Rep. of
Belgium	Ireland	Spain
Bulgaria	Israel	Switzerland
Chile	Italy	Thailand
Cuba	Japan	Turkey
Czechoslovakia	Korea, Dem. P. Rep. of	U.A.R.
France	Netherlands	United Kingdom
Germany	New Zealand	U.S.S.R.
Hungary	Poland	Yugoslavia
ICAITI*	Portugal	
India	Romania	

No Member Body opposed the approval of the Draft.

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

* Instituto Centroamericano de Investigación y Tecnología Industrial (Costa Rica, Guatemala, Honduras, Nicaragua, El Salvador, Panama).

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HYDROCHLORIC ACID FOR INDUSTRIAL USE

DETERMINATION OF TOTAL ACIDITY

Volumetric method

1. SCOPE

This ISO Recommendation describes a volumetric method for the determination of the total acidity of hydrochloric acid for industrial use, conventionally expressed as HCl.

2. PRINCIPLE

Titration of total acidity by means of a sodium hydroxide standard volumetric solution, in the presence of bromocresol green.

3. REAGENTS

Distilled water or water of equivalent purity, neutral to bromocresol green, should be used in the test.

3.1 *Sodium hydroxide*, N standard volumetric solution (see Note, section 6).

3.2 *Bromocresol green*, 1 g/l ethanolic solution.

Dissolve 0.1 g of bromocresol green in 95 % (v/v) ethanol and dilute to 100 ml with the same ethanol.

4. APPARATUS

Ordinary laboratory apparatus and

4.1 *Ground-glass stoppered flask*, capacity approximately 500 ml, with neck of about 30 mm diameter.

4.2 *Spherical glass ampoule*, of suitable shape and capacity, for example 20 mm in diameter, having one capillary end of about 50 mm in length (see example indicated in the following Figure).

4.3 *Conical flask*, capacity 500 ml, with ground-glass stopper.

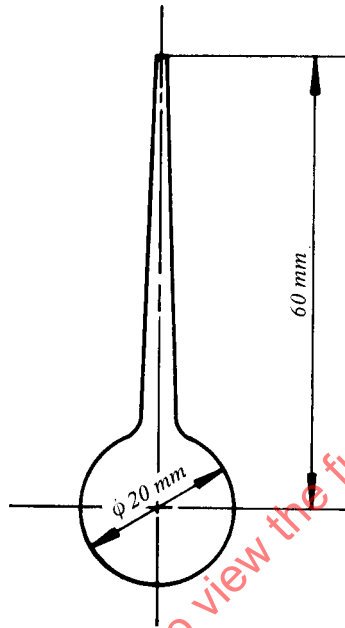


FIGURE 1 Spherical glass ampoule