

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 909

HYDROCHLORIC ACID FOR INDUSTRIAL USE  
DETERMINATION OF IRON CONTENT  
2,2'-bipyridyl spectrophotometric method

1st EDITION  
December 1968

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

## BRIEF HISTORY

The ISO Recommendation R 909, *Hydrochloric acid for industrial use – Determination of iron content – 2,2'-bipyridyl spectrophotometric 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. 1179) 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).

**HYDROCHLORIC ACID FOR INDUSTRIAL USE****DETERMINATION OF IRON CONTENT****2,2'-bipyridyl spectrophotometric method****1. SCOPE**

This ISO Recommendation describes a 2,2'-bipyridyl spectrophotometric method for the determination of the iron content of hydrochloric acid for industrial use.

**2. FIELD OF APPLICATION**

The method is applicable to the determination of iron content, expressed as Fe greater than 1 p.p.m.

**3. PRINCIPLE**

Evaporation of the test portion, taking up by means of hydrochloric acid and reduction of iron (III) by means of hydroxylammonium chloride.

Formation of an iron (II) - 2,2'-bipyridyl complex in a buffered medium (pH value between 4.5 and 6).

Photometric measurement of the coloured complex at a wavelength of about 522 nm.