

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 550

METHODS OF CHEMICAL ANALYSIS OF MANGANESE ORES
DETERMINATION OF TITANIUM CONTENT

1st EDITION

December 1966

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Printed in Switzerland

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

BRIEF HISTORY

The ISO Recommendation R 550, *Methods of Chemical Analysis of Manganese Ores — Determination of Titanium Content*, was drawn up by Technical Committee ISO/TC 65, *Manganese Ores*, the Secretariat of which is held by the Komitet Standartov, Mer i Izmeritel'nyh Priborov pri Sovete Ministrov SSSR (GOST).

Work on this question by the Technical Committee began in 1957 and led, in 1959, to the adoption of a Draft ISO Recommendation.

In November 1962, this Draft ISO Recommendation (No. 539) 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:

Australia	Hungary	Romania
Austria	India	Spain
Burma	Iran	U.A.R.
Chile	Ireland	United Kingdom
Czechoslovakia	Italy	U.S.S.R.
France	Japan	Yugoslavia
Germany	Poland	

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 1966, to accept it as an ISO RECOMMENDATION.

METHODS OF CHEMICAL ANALYSIS OF MANGANESE ORES**DETERMINATION OF TITANIUM CONTENT****(Atomic mass Ti: 47.90; molecular mass TiO₂: 79.90)****1. GENERAL INSTRUCTIONS**

- 1.1** In the following analysis, use a sample for chemical analysis of air-dried manganese ore, which has been crushed to a size not exceeding 0.10 mm and checked on a sieve of appropriate size.

Simultaneously with the collection of samples for the determination of titanium, take three more test samples for the determination of hygroscopic moisture.

Calculate the content of titanium in ore which is absolutely dry by multiplying the numerical results of the determination of titanium by the conversion factor K , as found from the following formula:

$$K = \frac{100}{100 - A}$$

where A = hygroscopic moisture content, per cent.

- 1.2** The determination of titanium in manganese ore is carried out by simultaneously analysing three samples of ore with two blank determinations to enable a corresponding correction in the result of the determination to be made.

Simultaneously and under the same conditions, carry out a check analysis of a standard sample of manganese ore, for titanium content.

The arithmetical mean of the three results is accepted as the final result.