

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 318

METHODS OF CHEMICAL ANALYSIS OF MANGANESE ORES
DETERMINATION OF ALUMINIUM OXIDE

1st EDITION

July 1963

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 318, *Methods of Chemical Analysis of Manganese Ores—Determination of Aluminium Oxide*, 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.

Work on this question by the Technical Committee began in 1954 and led, in 1957, to the adoption of a Draft ISO Recommendation.

In October 1958, this Draft ISO Recommendation (No. 251) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Austria	Hungary	Portugal
Bulgaria	India	Republic of
Burma	Ireland	South Africa
Chile	Italy	Romania
Czechoslovakia	Japan	Spain
France	Netherlands	United Kingdom
Germany	Poland	U.S.S.R.

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 July 1963, to accept it as an ISO RECOMMENDATION.

METHODS OF CHEMICAL ANALYSIS OF MANGANESE ORES

DETERMINATION OF ALUMINIUM OXIDE

(Atomic mass Al: 26.98; molecular mass Al_2O_3 : 101.96)

This ISO Recommendation contains two parts:

- I. Introduction. section I,
 II. Oxyquinoline method of aluminium oxide determination with its preliminary isolation in the form of phosphate sections 2 to 5.

 I. INTRODUCTION

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 aluminium oxide, take three more test samples for the determination of hygroscopic moisture.

Calculate the content of aluminium oxide in ore which is absolutely dry by multiplying the numerical results of the determination of aluminium oxide 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 aluminium oxide 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 aluminium oxide content.

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