

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 317

METHODS OF CHEMICAL ANALYSIS OF MANGANESE ORES
DETERMINATION OF ARSENIC

1st EDITION

July 1963

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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 317, *Methods of Chemical Analysis of Manganese Ores—Determination of Arsenic*, 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. 250) 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 ARSENIC

(Atomic mass As: 74.91)

This ISO Recommendation contains two parts:

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|---|------------------|
| I. Introduction | section 1, |
| II. Colorimetric method of arsenic determination in the form of a blue arseno-molybdate complex | 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 arsenic, take three more test samples for the determination of hygroscopic moisture.

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

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