

CCS D 32



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 14949.12-2021

**Manganese ores - Determination of combined water content -
Gravimetric method**

Issued on: May 21, 2021

Implemented on: December 1, 2021

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting. This document is part 12 of GB/T 14949. GB/T 14949 has released the following parts.

---Manganese ore chemical analysis method determination of chromium content;

---Determination of nickel content of manganese ore by flame atomic absorption spectrometry;

---Manganese ore chemical analysis method determination of barium oxide content;

---Manganese ore chemical analysis method determination of vanadium content;

---Determination of titanium content in manganese ore Diantipyrylmethane spectrophotometric method;

---Manganese ore chemical analysis method determination of copper, lead and zinc content;

---Manganese ore chemical analysis method sodium and potassium determination;

---Gravimetric method for the determination of wet storage water of manganese ore;

---Manganese ore chemical analysis method determination of sulfur content;

---Manganese ore chemical analysis method determination of cobalt content;

---Determination of carbon content of manganese ore by gravimetric method and infrared absorption method;

---Gravimetric method for determination of combined water content of manganese ore.

This document replaces GB/T 14949.12-1994 "Determination of combined water content in chemical analysis methods of manganese ore", and is in line with GB/T 14949.12-

Compared with.1994, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Deleted lead oxide, lead chromate, lead chromate-lead oxide mixture, and pumice (see 3.2 to 3.5 in the.1994 edition);
- b) Modified the relevant requirements for instruments and devices (see Chapter 6, Chapter 4 of the.1994 edition);
- c) The schematic diagram of the analysis device has been deleted (see 4.10 of the.1994 edition);
- d) Modified sampling and sample preparation requirements (see Chapter 7, Chapter 5 of the.1994 edition);
- e) Modified the combined water content in Table 1 (see 8.1, 6.1 of the.1994 edition), and deleted the determination of wet storage water (see the.1994 edition of 6.1).
6.1);
- f) The requirement for the number of measurements has been added (see 8.2);
- g) Modified the calculation of analysis results (see 9.1, Chapter 7 of the.1994 edition), and added the determination and expression of analysis results (see 9.2);
- h) Modified the precision requirements (see Chapter 10, Chapter 8 of the.1994 edition);
- i) Added test report (see Chapter 11);
- j) The test result acceptance flow chart has been added (see Appendix C).

This document uses the redrafting method to modify and adopt ISO 549.1981 "Gravimetric Method for the Determination of Combined Water Content of Manganese Ore".

Compared with ISO 549.1981, this document has many adjustments in structure. Appendix A lists this document and ISO 549.1981.

Compare the list of changes in the chapter number.

Compared with ISO 549.1981, there are technical differences between this document and

the clauses involved in these differences have been passed on the outer margins.

The vertical single line (|) is marked, and a list of the corresponding technical differences and their reasons is given in Appendix B.

This document has also made the following editorial changes.

- a) Delete the example diagram of the instrument (see Chapter 5 of ISO 549.1981);
- b) An informative appendix has been added (see Appendix A, Appendix B, and Appendix D).

Introduction

As there are many elements involved in the detection process of manganese ore, the applicable scope and applicable methods of the elements are different. to ensure that Manganese ore testing standards are convenient and accurate. We have established a national support for manganese ore testing based on the analysis methods for different elements of manganese ore.

---GB/T 14949.1.Determination of chromium content in chemical analysis methods of manganese ore. The purpose is to measure the chromium content in manganese ore, using Diphenylcarbazide photometric method and silver persulfate titration method.

---GB/T 14949.2.Determination of nickel content in manganese ores by flame atomic absorption spectrometry. The purpose is to measure nickel in manganese ore Content, using flame atomic absorption spectrometry.

---GB/T 14949.3.Method for chemical analysis of manganese ore. Determination of barium oxide content. The purpose is to measure the barium oxide content in manganese ore The amount is based on the barium sulfate gravimetric method.

---GB/T 14949.4.Method for chemical analysis of manganese ore. Determination of vanadium content. The purpose is to measure the vanadium content in manganese ore, using

Phosphotungstovanadic acid photometric method.

---GB/T 14949.5.Determination of titanium content in manganese ore Diantipyrylmethane spectrophotometric method. The purpose is to measure manganese ore

The content of titanium in it was determined by the diantipyrylmethane spectrophotometric method.

---GB/T 14949.6.Methods for chemical analysis of manganese ore Determination of copper, lead and zinc content. The purpose is to measure copper and lead in manganese ore

And zinc content, using flame atomic absorption spectrometry.

---GB/T 14949.7.Methods for chemical analysis of manganese ore. Determination of sodium and potassium content. The purpose is to measure the sodium and potassium content in manganese ore

Quantities, using flame atomic absorption spectrometry.

---GB/T 14949.8.Gravimetric method for the determination of wet storage water in manganese ore. The purpose is to measure the amount of sodium wet storage water in manganese ore,

Use the weight method.

---GB/T 14949.9.Determination of sulfur content in chemical analysis methods of manganese ore. The purpose is to measure the sulfur content in manganese ore, using Barium sulfate gravimetric method and combustion iodine titration method.

---GB/T 14949.10.Method for chemical analysis of manganese ore. Determination of cobalt content. The purpose is to measure the cobalt content in manganese ore, using Nitroso R salt photometric method.

---GB/T 14949.11.Determination of carbon content of manganese ore by gravimetric method and infrared absorption method. The purpose is to measure the manganese ore The carbon content is based on the gravimetric method and infrared absorption method.

---GB/T 14949.12.Gravimetric method for determination of combined water content of manganese ore. The purpose is to measure the combined water content of manganese ore The amount, using the weight method.

Determination of combined water content of manganese ore by gravimetric method

Warning---Personnel using this document should have formal laboratory work experience. This document does not indicate all possible safety issues

question. The user is responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated by relevant national laws and regulations.

1 Scope

This document specifies the gravimetric method for determining the combined water content in manganese ore.

This document is applicable to the determination of the combined water content in manganese ore, the measurement range (mass fraction). 1.00% ~ 8.00%.