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

GB/Z 42520-2023

**Guidelines for X-ray fluorescence spectrometric laboratory
practice for the analysis of iron ores**

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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 for Standardization Documents"

drafting:

This document is modified to adopt ISO /T R18336:2016 "Guidelines for Good X-ray Fluorescence Laboratory Practice in the Iron Ore Industry":

Compared with ISO /T R18336:2016, this document has more adjustments in structure: Struct number changes between two files compared to one

See Appendix A for a list:

The technical differences between this document and ISO /T R18336:2016 and their reasons are as follows:

--- Added the definitions of "counting statistical error", "reading error" and "melt sheet preparation error" (see 3:1, 3:2 and 3:3) to facilitate this document

correct understanding of the application;

--- Added GB/T 6379:1 and GB/T 6379:2 for normative references, and changed the calculation requirements of precision from "should be in accordance with the appendix

G stipulated" was changed to "should be carried out in accordance with GB /Z 42358-2023, GB/T 6379:1 and GB/T 6379:2" (see

6:3), in order to meet the actual application;

---Change the role of Appendix F and Appendix H from normative to informative, so as to comply with the provisions of GB/T 1:1-2020;

---Replace ISO /T R18231 with normatively quoted GB /Z 42358-2023 (see Table 1, 7:1) to adapt to my country's technical regulations

pieces to increase operability;

---Replace ISO 3082 (see 7:2) with the normatively quoted GB/T 10322:1-2014 to adapt to my country's technical conditions, adding

Operability;

---Replace ISO 7870-2 (see 7:3) with the normatively quoted GB/T 17989:2-2020 to adapt to my country's technical conditions, adding

Increase operability:

The following editorial changes have been made to this document:

---Change the name of the standard to "Operation Guidelines for Iron Ore X-ray Fluorescence Spectroscopic Analysis Laboratory";

--- Deleted the expression "Because this document is a guiding technical report, not a national mandatory standard" (see ISO /T R18336:

2016 Chapter 3, paragraph 1):

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document provides the operation guide for the iron ore X-ray fluorescence spectroscopic analysis laboratory (hereinafter referred to as "laboratory"):

This document is suitable for quality control in laboratories:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

GB/T 6379:1 Accuracy of measurement methods and results (trueness and precision) Part 1: General principles and definitions

GB/T 6379:2 Accuracy of measurement methods and results (trueness and precision) Part 2: Determining the weight of standard measurement methods

Basic methods for reproducibility and reproducibility

GB/T 10322:1-2014 iron ore sampling and sample preparation method (ISO 3082:2009, IDT)

GB/T 17989:2-2020 Control Drawings Part 2: Conventional Control Drawings (ISO 7870-2:2013, MOD)

GB /Z 42358-2023 Determination of accuracy of wavelength dispersive X-ray fluorescence spectrometer for iron ore (ISO /T R18231:

2016, MOD)

ISO 9516-1:2003 Determination of multi-element content of iron ores - Wavelength dispersive X-ray fluorescence spectrometry - Part 1: Comprehensive process

prehensive procedure)

encematerials (CRMs)]

The following terms and definitions apply to this document:

3:1

Under certain measurement conditions (voltage, current, optical filter, limiting diaphragm, attenuator, collimator, spectroscopic crystal, pulse height analyzer

(PHA, 2theta, detector, measurement time, etc:), the error caused by the X-ray fluorescence spectrometer detector counting statistics process:

3:2

Reading error readingerror

Errors caused during the operation of X-ray fluorescence spectrometer instruments and components:

Note: Including detector X-ray counting leakage meter, X-ray light source fluctuation, circuit fluctuation, spectroscopic crystal fluctuation, instrument fluctuation, etc: