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

GB/T 6730.88-2024

**Iron ores-Determination of chlorine content-X-ray fluorescence
spectrometric method**

铁矿石 氯含量的测定 X射线荧光光谱法

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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 Part 88 of GB/T 6730 "Iron Ore". The published parts of GB/T 6730 are shown in Appendix A.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

This document is under the jurisdiction of the National Iron Ore and Direct Reduced Iron Standardization Technical Committee (SAC/TC317).

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Introduction

Iron ore is the main raw material for the steel industry. In the standard system of the steel industry, the standard system for determination of chemical composition of iron ore is one of the most important standards.

It is a very important part of the production process and plays an important role in ensuring the quality of iron ore products. This series of methods and standards serve the production of iron ore.

production, trade and application, providing technical support for the high-quality development of China's steel industry.

GB/T 6730 includes a series of standards for the determination of chemical composition of iron ore, which respectively stipulates the content of moisture, total iron, metal Iron, ferrous iron, silicon, aluminum, calcium, magnesium, sulfur, phosphorus, manganese, titanium, total rare earth, barium, chromium, vanadium, tin, copper, cobalt, nickel, zinc, niobium, bismuth, potassium, sodium, carbon, lead, arsenic, Determination methods for chemical components such as cadmium, mercury, fluorine, chlorine, loss on ignition and combined water.

In 1986, GB/T 6730 first issued 51 national standards for the determination of chemical composition of iron ore.

Based on the development of technology and actual production needs, after years of continuous formulation and revision, a relatively complete standard system has been formed.

The parts of GB/T 6730 to be published are shown in Appendix A.

Determination of chlorine content in iron ore X-ray fluorescence spectrometry

Warning---People who use this document should have practical experience in formal laboratory work. This document does not address all possible safety issues.

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

1 Scope

This document specifies a method for the determination of chlorine in iron ores by wavelength dispersive X-ray fluorescence spectrometry.

This document is applicable to the determination of chlorine content in natural iron ore, iron concentrate, sintered ore and pelletized ore. The determination range (mass fraction). 0.010%~ 1.20%.

2 Normative references

GB/T 6379.2

GB/T 6682

GB/T 6730.1

GB/T 8170

GB/T 10322.1

GB/T 12806

GB/T 12808

GB/T 16597

GB/T 20565

JJF1343

JJG810

3 Terms and definitions

The terms and definitions specified in GB/T 20565 apply to this document.

4 Principle

The sample was prepared into a borate melt sample, and the X-ray fluorescence intensity of the chlorine element was measured. The chlorine element peak position $\pm 0.5^\circ$ was used as the background measurement.

The calibration samples were prepared using high-purity reference materials, and the peak-to-background ratio of the calibration blank was calculated using the molten sample of pure Fe_2O_3 .

He melted the calibration background intensity of the calibration piece and subtracted it to obtain the net intensity of the chlorine element. The linear relationship between the

concentration of the calibration sample and the net intensity was used to calculate The same method is used to obtain the net intensity of the test sample and the reagent blank sample. After deducting the net intensity of the reagent blank, the calibration coefficient is calculated.

Calculate the chlorine concentration in the sample.

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