

ICS 77.080.01
CCS H11



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

GB/T 223.11-2025

Replacing GB/T 223.11-2008

**Iron, steel and alloy - Determination of chromium content -
Titrimetric method and spectrophotometric method**

钢铁及合金 铬含量的测定 滴定法和分光光度法

(English Translation)

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Foreword

GB/T 223.11-2025 is a recommended national standard (GB/T) of the People's Republic of China, issued on 29 August 2025 by the State Administration for Market Regulation and the Standardization Administration of China, with effect from 1 March 2026.

This edition replaces GB/T 223.11-2008.

The document adopts an international standard (ISO or IEC).

It is under the responsibility of the China Iron and Steel Association.

Classification: ICS 77.080.01; CCS H11.

1 Scope

This standard covers the determination of chromium in iron, steel and alloys, and offers three analytical routes: a visual titrimetric method, a potentiometric titration method, and a spectrophotometric method that uses sodium carbonate separation followed by diphenylcarbazide. Between them the methods address pig iron, carbon steel, alloy steel, precision alloys and high-temperature alloys, with each method suited to a different range of chromium content.

The document opens with a warning that users should have practical laboratory experience and are responsible for appropriate safety and health measures.

It is intended for chemical analysis laboratories at steel mills, foundries, alloy producers, inspection bodies and research institutes, where chromium results are needed for grade verification, certification and incoming material control. Issued on 29 August 2025, it takes effect on 1 March 2026 and replaces GB/T 223.11-2008. It is a recommended national standard, voluntary unless required by contract or a product specification.