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Ferrous alloys — Sampling and sample preparation for chemical analysis —

Part 1: Ferrochromium, ferrosilicochromium, ferrosilicon, ferrosilicomanganese, ferromanganese

Ferro-alliages — Échantillonnage et préparation des échantillons pour analyse chimique —

Partie 1: Ferro-chrome, ferro-silico-chrome, ferro-silicium, ferro-silico-manganèse, ferro-manganèse

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4552-1 was prepared by Technical Committee ISO/TC 132, *Ferrous alloys*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Ferrous alloys — Sampling and sample preparation for chemical analysis —

Part 1 :

Ferrous chromium, ferrosilicochromium, ferrosilicon, ferrosilicomanganese, ferromanganese

1 Scope and field of application

This part of ISO 4552 specifies the methods for sampling and sample preparation for the determination of the chemical composition of a consignment of ferrous chromium, ferrosilicochromium, ferrosilicon, ferrosilicomanganese or ferromanganese.

NOTE — For purposes of sampling, ferrous chromium is subdivided into non-crushable and crushable alloys. Low-carbon and certain medium-carbon ferrous chromiums are non-crushable alloys; medium-carbon and high-carbon ferrous chromiums are crushable alloys.

Part 2 of ISO 4552 specifies the methods for use with ferrotitanium, ferromolybdenum, ferrotungsten, ferrowniobium and ferrovandium.

2 Reference

ISO 3713, *Ferrous alloys — Sampling and sample preparation — General rules.*

3 General requirements

3.1 Definitions, general requirements for sampling and sample preparation, tools and equipment

See ISO 3713.

3.2 Quality characteristics for precision requirements

The overall precision of the determination of the chemical composition of a consignment β_{SDM} , precision of sampling β_S , precision of sample preparation β_D and precision of the method of analysis β_M at the 95 % confidence level shall be specified with respect to the quality characteristics shown in table 1.

Table 1 — Quality characteristics for precision requirements

Ferrous alloy	Quality characteristic, % (m/m)
Ferrous chromium	Chromium content
Ferrosilicochromium	Chromium and silicon contents
Ferrosilicon	Silicon content
Ferrosilicomanganese	Silicon and manganese contents
Ferromanganese	Manganese content

4 Overall precision of the determination of the chemical composition of a consignment

The methods of sampling and sample preparation specified in this part of ISO 4552 allow the determination of the chemical composition of a consignment at the 95 % confidence level with the overall precision shown in table 2, depending on the mass of the consignment sampled.