



BSI Standards Publication

Iron ores — Determination of sulfur content

Part 1: Barium sulfate gravimetric method

National foreword

This Published Document is the UK implementation of [ISO/TS 4689-1:2023](#). It supersedes [BS 7020-7.1:1988](#), which is withdrawn.

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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Part 1: Barium sulfate gravimetric method

Minerais de fer — Dosage du soufre —

Partie 1: Méthode gravimétrique au sulfate de baryum



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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 102, *Iron Ores*, Subcommittee SC 02, *Chemical analysis*.

This first edition of [ISO/TS 4689-1](#) cancels and replaces the first edition of [ISO 4689:1986](#), which has been technically revised.

The main changes are as follows:

- the decomposition method of samples has been changed from the original acid dissolution and alkali melting method to soda-zinc oxide semi melting method.

A list of all parts in the ISO 4689 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In this document, a new way of melting the samples for determination of sulfur content by barium sulfate gravimetric method is specified as follows.

- Samples are semi-molten with sodium carbonate and zinc oxide.
- The sulfate ions are leached by electromagnetic stirring and separated from the iron and other interference elements such as lead, antimony, bismuth, tin, silicon, titanium, etc.

This method is also suitable for complex natural and artificial sample analysis.

This document consists of Part 1 of the ISO 4689 series, *Iron ores — Determination of sulfur content*.