



ISO 21068-3

Chemical analysis of raw materials and refractory products containing silicon-carbide, silicon-nitride, silicon-oxynitride and sialon —

Part 3: Determination of nitrogen, oxygen and metallic and oxidic constituents

Analyse chimique des matières premières et des produits réfractaires contenant du carbure de silicium, du nitrure de silicium, de l'oxynitride de silicium et du SiAlON —

Partie 3: Dosage de l'azote, de l'oxygène et des constituants métalliques et oxydés

**Second edition
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This is a preview of ISO 21068-3:2024. [Click here to purchase the full version from the ANSI store.](#)



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This second edition cancels and replaces the first edition (ISO 21068-3:2008), which has been technically revised.

The main changes are as follows:

- methods described in ISO 12698-1:2007 for the dosage of free aluminium, total nitrogen and free alumina have been included in this document;
- methods that are no longer used in practice have been removed;
- normative references and bibliography have been updated;
- document has been editorially revised.

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The ISO 21068 series has been developed from the combination of EN 12698-1:2007^[1] and EN 12698-2:2007^[2] and ISO 21068-1:2008^[3], ISO 21068-2:2008^[4] and ISO 21068-3:2008^[5]. The last three standards have been originally developed from the combination of Japanese standard JIS R 2011:2007^[6] and work items developed within CEN. Because there is a wide variety of laboratory equipment in use, the most commonly used methods are described.

ISO 21068-4 is derived from EN 12698-2:2007^[2] describing XRD methods for the determination of mineralogical phases typically apparent in nitride and oxy-nitride bonded silicon carbide refractory products using a Bragg-Brentano diffractometer.

This document is also applicable to the analysis of SiC raw materials.

Except the XRD method specified in ISO 21068-4, all chemical methods specified in this document are only validated for SiC raw materials. For refractory products classified in ISO 10081-1^[7], ISO 10081-2^[8], ISO 10081-3^[9] and ISO 10081-4^[10] (shaped) and ISO 1927-1^[11] (unshaped) and raw materials containing carbon and/or silicon carbide this document applies after appropriate verification for any matrix composition.