Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-19161-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **11.01.2024**

Date of issue: 11.01.2024

This annex is a part of the accreditation certificate D-PL-19161-01-00.

Holder of partial accreditation certificate:

CRB Analyse Service GmbH
Bahnhofstraße 14, 37181 Hardegsen

with the location

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Bahnhofstraße 14, 37181 Hardegsen

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the general with the principles of DIN EN ISO 9001.

Tests in the areas:

Quantitative X-ray analysis of oxidic and oxidable materials;
Semi-quantitative X-ray analysis of solids;
Determination of Carbon in oxidic, carbonatic, and/or SiC-bearing waste-, raw- and processed materials; gravimetric analysis of raw- and processed materials

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.

Within the given testing field marked with * the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS the free choice of standard or equivalent testing methods.

Within the given testing field marked with ** the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS the modification, development and refinement of testing methods.

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use stadards or equivalent testing methods listed here with different issue dates.

The listed testing methods are exemplary. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

1 Quantitative X-ray fluorescence analysis of solids and liquids to determine of elements with atomic numbers from Z=9 (fluorine) to Z= 91 (uranium) **

ISO 29581-2 2010-03	Cement - Test methods – Part 2: Chemical analysis by X-ray fluorescence
DIN EN ISO 12677 2013-02	Chemical analysis of refractory products by XRF - Fused cast bead method
DIN EN 196-2 2013-10	Method of testing cement – Part 2: Chemical analysis of cement
DIN EN 15309 2007-08	Characterization of waste and soil - Determination of elemental composition by X-ray fluorescence (*Here of raw materials and materials for reuse*)
DIN 51418-2 1996-09	X-ray spectrometry - X-ray emission and X-ray fluorescence analysis (XRF) – Part 2: Definitions and basic principles for measurements, calibration and evaluation of results
DIN 51418-2 Supplement 1 2000-04	X-ray spectrometry - X-Ray Emission- and X-ray Fluorescence analysis (XRF) – Part 2: Definitions and basic principles for measurements, calibration and evaluation of results; additional information and examples of calculation

DIN 51729-10 2011-04	Testing of solid fuels – Determination of chemical composition of fuel ash – Part 10: X-Ray Fluorescence Analysis
CRB PA - 08 2018-01	Determination of the KI-value of man-made mineral fibres using X-ray fluorescence analysis
CRB PA – 15 2018-07	Determination of HBCD in polystyrene rigid foam waste using X-ray fluorescence analysis (XRF)

2 Semiquantitative X-ray analysis of solids for determination of elements with ordinal numbers of Z = 9 (fluorine) to Z = 92 (uranium) **

DIN EN 16424 2015-03	Characterization of waste – Screening methods for the element composition by portable X-ray fluorescence instruments (*Here of raw materials and materials for reuse*)
CRB PA – 03 2018-02	Semi-quantitative screening analysis of solids for the determination of elements with the fundamental parameter programme OMNIAN

3 Determination of carbon in oxidic, carbonatic and/or SiC-bearing waste-, raw- and processed materials by means of elementary analysis*

DIN ISO 10694 1996-08	Soil quality - Determination of organic and total carbon after dry combustion (elementary analysis) (*Here of raw materials and materials for reuse*)
DIN EN ISO 21068-1 2008-12	Chemical analysis of silicon-carbide-containing raw materials and refractory products - Part 1: General information and sample preparation
DIN EN ISO 21068-2 2008-12	Chemical analysis of silicon-carbide-containing raw materials and refractory products - Part 2: Determination of loss on ignition, total carbon, free carbon and silicon carbide, total and free silica and total and free silicon;
DIN EN 13137 2001-12	Characterization of waste - Determination of total organic carbon (TOC) in waste, sludges and sediments; (*Here of raw materials and materials for reuse*)

DIN EN 13639 2002-07	Determination of total organic carbon in limestone; German version EN 13639:2002 (*Here: alternative test procedure 2: oxidation in furnace with infrared-detection)*
DIN EN 13639 2017-12	Determination of total organic carbon in limestone *(Here: alternative test procedure 2: oxidation in furnace with infrared-detection)*

4 Determination of Loss on Ignition of raw- and processed materials by means of gravimetriy*

DIN EN ISO 26845 2008-06	Chemical analysis of refractories - General requirements for wet chemical analysis, atomic absorption spectrometry (AAS) and inductively coupled plasma atomic emission spectrometry (ICP-AES) methods *(Here: Chapter 9: Determination of ignition loss)*
DIN EN 196-2 2013-10	Method of testing cement – Part 2: Chemical analysis of cement; German version EN 196-2:2013 *(Here: Determination of ignition loss)*
DIN 51081 2002-12	Testing of oxidic raw materials and materials - Determination of change in mass on ignition

5 Determination of Density

DIN EN 993-18 2002-11	Methods of test for dense shaped refractory products - Part 18: Determination of bulk density of granular materials by the water method with vacuum

Abbreviations used:

AAS	atomic absorption spectrometry
CRB PA	In-house method of the CRB Analyse Service GmbH
DIN	Deutsches Institut für Normung e.V. – German institute for standardization
EN	Europäische Norm – European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization