

DACH Deutsche Akkreditierungsstelle Chemie GmbH

Signatory to EA Multilateral Agreement and ILAC Mutual Recognition Arrangement

represented in the

Deutschen AkkreditierungsRat



Accreditation

The DACH Deutsche Akkreditierungsstelle Chemie GmbH herewith confirms that the testing laboratory

Heraeus Quarzglas GmbH & Co. KG
Innovation Management
Quarzstraße 8
63450 Hanau

at the locations

Chemie- und Abwasserlabor
Quarzstraße 8
63450 Hanau

Prüflabor
Reinhard-Heraeus-Ring 29
63801 Kleinostheim

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out testing in the following area:

Testing area:

Chemistry

Types of tests/test methods:

electrochemical procedures, atomic spectrometry, sum parameters, sampling

Test items:

inorganic chemicals (hydrofluoric acid), minerals (rock crystal), quartz sand, quartz glass, semifinished products and base-materials (of quartz glass), waste water

This accreditation is valid until: 21.11.2012

The annex is part of this certificate and comprises 4 pages.

DAR registration number: **DAC-PL-0042-97**

Frankfurt, 11.09.2009

Dr. A. Steinhorst
Managing Director



Annex to Certificate of Accreditation DAC-PL-0042-97 (11.09.2009)

The accreditation under the terms of DIN EN ISO/IEC 17025:2005 is valid until: 21.11.2012

Holder of the Certificate:

**Heraeus Quarzglas GmbH & Co. KG
Innovation Management
Quarzstraße 8
63450 Hanau**

at the locations

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Testing area

- Chemistry

Individual test methods:

- electrochemical procedures
- atomic spectrometry
- sum parameters
- sampling

Location Hanau**Individual test methods for electrochemical procedures**

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
AU08050	Determination of chloride by means of ISE	quartz glass, quartz sand and minerals (rock crystal)
AU08060	Determination of fluoride by means of ISE	quartz glass, quartz sand and minerals (rock crystal)
DIN 38 404 – C5 1984-01	Determination of the pH-value in waste water	waste water
DIN EN ISO 7393-2 - G4-2 2000	Determination of the free chlorine content and the total chlorine in waste water	waste water
DIN 38 405 – D4-2 1985-07	Determination of the total inorganic bound fluorides after dissolving and distillation in waste water	waste water
DIN 38404 - C 4 1976-12	Determination of temperature	waste water

Individual test methods for atomic spectrometry

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
AU08090	Determination of sodium, potassium and lithium by means of flame atomic absorption spectroscopy	inorganic chemicals (hydrofluoric acid), minerals (rock crystal), quartz sand, quartz glass
AU08080	Determination of the elements Al, Ca, Cr, Cu, Fe, Mg, Mn, Ti and Zr by means of ICP-AES	inorganic chemicals (hydrofluoric acid), minerals (rock crystal), quartz sand, quartz glass
AU08190	Determination of the elements Li, Na, K, Mg, Ca, Fe, Cu, Cr, Mn, Ti, Al, Zr, Ni, Ge, Mo, W, V, Co, Nb, Zn and Hf by means of ICP-OES (Optima 3300)	inorganic chemicals (hydrofluoric acid), minerals (rock crystal), quartz sand, quartz glass

Individual test methods for sum parameters

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
DIN 38 409 – H9-2 1980-07	Determination of the volume of depositable substances in water and waste water with a test volume of 2 l	waste water

Individual test methods for sampling

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
DIN 38 402 – A11 1995-12	Taking a waste water sample	waste water
AU 08010	Sampling of quartz sand, granulate and grain	quartz sand

Further applicable documents

DIN-Nr. / Abbr. of SAA / version	Titel of test method
AU 08020	Sample preparation of quartz glass for dissolving in hydrofluoric acid
AU 08030	Thermal treatment of rock crystal and Clear-Quartz
AU 08040	Sample preparation of quartz glass for the determination of chlorides or fluorides
AU 08070	Dissolving of samples and production of the measuring solution for F-AAS and ICP-AES for quartz sand, quartz glass and rock crystal.

Location Kleinostheim**Individual test methods for atomic spectrometry**

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
AA65070	Determination of the elements Li, Na, K, Mg, Ca, Fe, Cu, Ni, Cr, Mn, Ti, Al, Zr und V mittels ICP-MS Agilent 7500cc	quartz glass, quartz sand and minerals (rock crystal)

Individual test methods for sampling

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
AA65050	Sampling for the analysis of the surface allocation on quartz glass surfaces	quartz glass, quartz sand and minerals (rock crystal)
AA65060	Sampling for etching of quartz glass layers near the surface	quartz glass, quartz sand and minerals (rock crystal)

Further applicable documents

DIN-Nr. / Abbr. of SAA / version	Titel of test method	Test items
AA65010	Sample preparation of quartz glass for dissolving in hydrofluoric acid when measurement by means of ICP-MS	
AA65020	Dissolving of samples and production of the measuring solution and standard solution for ICP-AES	
AA65080	Handling of different sample geometry with the sampling	

for analysing of:

inorganic chemicals (hydrofluoric acid), minerals (rock crystal), quartz sand, quartz glass, semifinished products and base-materials (of quartz glass) and waste water.

Authorized signatory power in regard to the listed types of test:

Location Hanau: Mr. K.-H. Wiedemann, Mrs. A. Heidloff, Mr. R. Larwig

Location Kleinostheim: Mr. K.-H. Wiedemann, Mrs. A. Heidloff, Mr. E. Spinnler

