Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-K-19398-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **18.03.2024**

Date of issue: 18.03.2024

Holder of accreditation certificate:

Sartorius Lab Instruments GmbH & Co. KG
Otto-Brenner-Straße 20, 37079 Göttingen

with the locations

Sartorius Lab Instruments GmbH & Co. KG
Otto-Brenner-Straße 20, 37079 Göttingen

Sartorius Lab Instruments GmbH & Co. KG
Groner Siekanger, Göttingen

Sartorius France S.A.S.
2 rue Antoine – Laurent de Lavoisier, 91410 Dourdan, France

Sartorius Spain S.A.
José Bardasano Baos N$^{o.}$ 9, Planta Tercera, 28016 Madrid, Spain

Sartorius Italy S.r.L.
Via Torino 3/5, 20814 Varedo, Italy

Sartorius Poland sp.z-o.o.
ul. Wrzesinska 70, 62-025 Kostrzyn, Poland

Sartorius Belgium S.A.
Avenue Ariane 5, 1200 Woluwe-Saint-Lambert near Brussels, Belgium

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.

The calibration laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The calibration 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 calibration laboratories and they conform to the principles of DIN EN ISO 9001.

Mechanical quantities

- **Mass (mass standards)**
- **Weighing instruments** [a)]

Chemical and medical quantities

Chemical analysis, reference materials

- **Volume of liquids** [b)]

[a)] only on-site calibration
[b)] also on-site calibration

The calibration laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use calibration standards or equivalent calibration procedures listed here with different issue dates. The calibration laboratory maintains a current list of all calibration standards / equivalent calibration procedures within the flexible scope of accreditation.

Sartorius Lab Instruments GmbH & Co. KG, Otto-Brenner-Straße, Göttingen, Germany
Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Mass standard Conventional mass	1 mg to 10 mg	OIML R 111-1:2004	2.0 µg	For fixed nominal values for weighing pieces according to OIML R 111-1:2004, Class E_2
	20 mg		3.0 µg	
	50 mg		4.0 µg	
	100 mg		5.0 µg	
	200 mg		6.0 µg	
	500 mg		8.0 µg	
	1 g		10 µg	
	2 g		12 µg	
	5 g		16 µg	
	10 g		20 µg	
	20 g		25 µg	
	50 g		30 µg	
	100 g		50 µg	
	200 g		0.10 mg	
	500 g		0.25 mg	
	1 kg		0.50 mg	
	2 kg		1.0 mg	
	5 kg		2.5 mg	
	10 kg		5.0 mg	
	20 kg		10 mg	
	50 kg		25 mg	
	100 kg		0.50 g	for weighing pieces according to OIML R 111-1:2004, Class F_2

DAkkS Deutsche Akkreditierungsstelle

Sartorius Lab Instruments GmbH & Co. KG, Otto-Brenner-Straße, Göttingen, Germany
Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Conventional mass	1 mg to 20 mg	OIML R 111-1:2004	3.0 µg	Weighing pieces with free nominal values
	> 20 mg to 50 mg		4.0 µg	
	> 50 mg to 100 mg		5.0 µg	
	> 100 mg to 200 mg		6.0 µg	
	> 200 mg to 500 mg		8.0 µg	
	> 500 mg to 1 g		10 µg	
	> 1 g to 2 g		12 µg	
	> 2 g to 5 g		15 µg	
	> 5 g to 10 g		20 µg	
	> 10 g to 20 g		25 µg	
	> 20 g to 50 g		30 µg	
	> 50 g to 100 g		50 µg	
	> 100 g to 200 g		0.10 mg	
	> 200 g to 500 g		0.25 mg	
	> 500 g to 1 kg		0.50 mg	
	> 1 kg to 2 kg		1.0 mg	
	> 2 kg to 5 kg		2.5 mg	
	> 5 kg to 10 kg		5.0 mg	
	> 10 kg to 20 kg		10 mg	
	> 20 kg to 50 kg		25 mg	
	> 50 kg to 60 kg		30 mg	
	> 60 kg to 80 kg		0.5 g	

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Weighing instruments Non-automatic electronic weighing instruments	to 10 kg	EURAMET Calibration Guide No. 18, Version 4.0	$1 \cdot 10^{-6}$	with weights according to OIML R 111-1:2004, Class E_2
	to 305 kg		$1 \cdot 10^{-5}$	with weights according to OIML R 111-1:2004, Class F_1
	to 6 000 kg		$1 \cdot 10^{-4}$	with weights according to OIML R 111-1:2004, Class M_1

Valid from: 18.03.2024
Date of issue: 18.03.2024

Sartorius Lab Instruments GmbH & Co. KG, Groner Siekanger, Göttingen, Germany
Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Volume of liquids				
Volume measuring instrument with air cushion (Piston operated pipettes)	0.1 µL to 1 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	5.0 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.
	> 1 µL to 10 µL		0.50 %	
	> 10 µL to 100 µL		0.20 %	
	> 0.1 mL to 20 mL		0.14 %	
Multichannel Piston operated pipettes	2 µL to 10 µL		0.50 %	
	> 10 µL to 100 µL		0.20 %	
	> 100 µL to 1500 µL		0.14 %	
Multiple dispensers	> 1 µL to 10 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-2:2018	0.25 %	The measurement uncertainty refers to the chosen volume.
	> 10 µL to 100 µL		0.15 %	
	> 0.1 mL to 50 mL		0.10 %	
Single dispensers	0.1 mL to 100 mL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	0.14 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Volume of liquids				
Volume measuring instrument with air cushion (Piston operated pipettes)	0.1 µL to 1 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	6.0 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.
	> 1 µL to 10 µL		0.60 %	
	> 10 µL to 100 µL		0.24 %	
	> 0.1 mL to 20 mL		0.17 %	
Multichannel Piston operated pipettes	2 µL to 10 µL		0.60 %	
	> 10 µL to 100 µL		0.24 %	
	> 100 µL to 1500 µL		0.17 %	
Multiple dispensers	> 1 µL to 10 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-2:2018	0.30 %	The measurement uncertainty refers to the chosen volume.
	> 10 µL to 100 µL		0.18 %	
	> 100 µL to 50 mL		0.12 %	
Single dispensers	0.1 mL to 100 mL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	0.17 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.

Sartorius France S.A.S., 2 rue Antoine – Laurent de Lavoisier, 91410 Dourdan, France

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Weighing instruments				
Non-automatic electronic weighing instruments	to 10 kg	EURAMET Calibration Guide No. 18, Version 4.0	$1 \cdot 10^{-6}$	with weights according to OIML R 111-1:2004, Class E_2
	to 305 kg		$1 \cdot 10^{-5}$	with weights according to OIML R 111-1:2004, Class F_1
	to 6 000 kg		$1 \cdot 10^{-4}$	with weights according to OIML R 111-1:2004, Class M_1

Sartorius Spain S.A., José Bardasano Baos Nº. 9, Planta Tercera, 28016 Madrid, Spain
On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Weighing instruments Non-automatic electronic weighing instruments	0.001 g	EURAMET Calibration Guide No. 18, Version 4.0	5.0 µg	with weights according to OIML R 111-1:2004, Class E_2
	0.002 g			
	0.005 g			
	0.01 g		6.6 µg	
	0.02 g		8.2 µg	
	0.05 g		10 µg	
	0.1 g		13 µg	
	0.2 g		17 µg	
	0.5 g		21 µg	
	1 g		25 µg	
	2 g		33 µg	
	5 g		41 µg	
	10 g		50 µg	
	20 g		66 µg	
	50 g		82 µg	
	100 g		0.13 mg	
	200 g		0.25 mg	
	500 g		0.67 mg	
	1 kg		1.6 mg	
	2 kg		2.6 mg	
	5 kg		6.7 mg	
	10 kg		13 mg	
	20 kg		0.19 g	with weights according to OIML R 111-1:2004, Class F_1
	50 kg		0.49 g	
	100 kg		0.97 g	
	150 kg		1.5 g	
	200 kg		20 g	with weights according to OIML R 111-1:2004, Class M_1
	300 kg		30 g	

Sartorius Italy S.r.L.Via Torino 3/5, 20814 Varedo, Italy
On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Weighing instruments Non-automatic electronic weighing instruments	to 10 kg	EURAMET Calibration Guide No. 18, Version 4.0	$1 \cdot 10^{-6}$	with weights according to OIML R 111-1:2004, Class E_2
	to 305 kg		$1 \cdot 10^{-5}$	with weights according to OIML R 111-1:2004, Class F_1
	to 6 000 kg		$1 \cdot 10^{-4}$	with weights according to OIML R 111-1:2004, Class M_1
Volume of liquids Volume measuring instrument with air cushion (Piston operated pipettes)	0.1 µL to 1 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	6.0 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.
	> 1 µL to 10 µL		0.60 %	
	> 10 µL to 100 µL		0.24 %	
	> 0.1 mL to 20 mL		0.17 %	
Multichannel Piston operated pipettes	2 µL to 10 µL		0.60 %	
	> 10 µL to 100 µL		0.24 %	
	> 100 µL to 1500 µL		0.17 %	
Multiple dispensers	> 1 µL to 10 µL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-2:2018	0.30 %	The measurement uncertainty refers to the chosen volume.
	> 10 µL to 100 µL		0.18 %	
	> 100 µL to 50 mL		0.12 %	
Single dispensers	0.1 mL to 100 mL	Gravimetric method DIN EN ISO 8655-6:2002 (withdrawn) DKD-R 8-1:2011	0.17 %	Measurement uncertainties refer to the nominal volume. For middle nominal volume the given measurement uncertainty has to be multiplied with 75 % and for lower nominal volume with 50 %.

Sartorius Poland sp.z-o.o., ul. Wrzesinska 70, 62-025 Kostrzyn, Poland
On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Weighing instruments Non-automatic electronic weighing instruments	to 10 kg	EURAMET Calibration Guide No. 18, Version 4.0	$1 \cdot 10^{-6}$	with weights according to OIML R 111-1:2004, Class E_2
	to 305 kg		$1 \cdot 10^{-5}$	with weights according to OIML R 111-1:2004, Class F_1
	to 6 000 kg		$1 \cdot 10^{-4}$	with weights according to OIML R 111-1:2004, Class M_1

Abbreviations used:

CMC	Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
DIN	Deutsches Institut für Normung e.V. – German institute for standardization
DKD-R	Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt
EN	European Standard
EURAMET	European Association of National Metrology Institutes
ISO	International Organization for Standardization
OIML	Organisation internationale de métrologie légale