

## Accreditation Scope

**LB-CAL-040**

### PHI Sigma Calibration

**407 | Habib AG Zurich Bank Building | Bank Street**

**Bur Dubai | Dubai | United Arab Emirates**

**Date: 02-02-2023**

**Valid to: 03-08-2025**

Accreditation History			
Scope	Issue No.	Details	Date
Temperature	6	Renewal of the accreditation and extension in scope	02-02-2023
Pressure	5	Renewal of the accreditation and modification in Range & Specification and CMC Values	
Mass		Renewal of the accreditation	
Balance			
Volume			
Temperature	5	Certificate validity was extended for 6 months from 04-08-2022 up to 03-02-2023	04-08-2022
Pressure	4		
Mass			
Balance			
Volume			
Temperature	4	Re-issued to comply with the new accreditation number format	30-11-2020
Pressure	3		
Mass			
Balance			
Volume			
Temperature	3	Renewal accreditation from EIAC (which was formerly known as DAC)	01-10-2019
Pressure	2		
Mass			
Balance			
Volume			

**Accreditation Scope**  
**Temperature Calibration**  
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Issue no.: 06

Date: 02-02-2023

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Temperature transmitters, Resistance Thermometers, Thermocouple with controller/indicator, Datalogger recorder, Temperature gauge, Digital thermometers, Temperature indicator of closed volume devices	PSC-SOP-TH1, PSC-SOP-TH2	-35 °C to 0 °C	0.5 °C	Laboratory/ customer Premises
		>0 °C to 90 °C	0.4 °C	
		>90 °C to 200 °C	0.6 °C	
		>200 °C to 400 °C	1.0 °C	
		>400 °C to 650 °C	1.5 °C	
Liquid-In-Glass thermometers	PSC-SOP-TH3	-35 °C to 0 °C	0.8 °C	Laboratory
		>0 °C to 90 °C	0.7 °C	
		>90 °C to 200 °C	1.0 °C	

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
IR-thermometers	PSC-SOP-TH7	50 °C to 250°C	2.0 °C to 3.0 °C	Laboratory
		>250 °C to 500 °C	3.0 °C to 6.1 °C	
Analog/digital humidity sensor, Thermohygrometers, RH transmitter	PSC-SOP-TH6	20 %RH to 50 %RH	2.0 %RH	Laboratory
		>50 %RH to 90 %RH	2.5 %RH	
Dry block calibrator	PSC-SOP-TH4	-35 °C to 0 °C	0.8 °C	Laboratory
		>0 °C to 90 °C	0.5 °C	
		>90 °C to 200 °C	0.7 °C	
		>200 °C to 400 °C	1.0 °C	
		>400 °C to 650 °C	1.5 °C	

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Temperature Data loggers	PSC-SOP-TH8	-25 °C to 70 °C	0.4 °C	Laboratory
Temperature Transmitters, Resistance Thermometers, Thermocouple with controller/Indicator/ Data Logger/ Recorder. Temperature Gauge Digital Thermometer with sensor	PSC-SOP-TH1 PSC-SOP-TH2	-80°C to 0°C	0.6 °C	Laboratory

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Chiller, Refrigerator and Freezer : 9 Points	PSC-SOP-TH 5 based on DKD-R 5-7	-80°C up to -40°C	2.5°C	Customer Premises
		-40°C upto 10°C	1.5°C	
Autoclave : 5 Points	PSC-SOP-TH 5 based on DKD-R 5-7	-20°C up to 150°C	1.7°C	Customer Premises
Liquid Bath : 5 Points		-80° up to 400°C	1.7°C	
Incubator ,Oven and Furnace : 9 Points		30°C up to 250°C	2°C	

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## Accreditation Scope

### Pressure Calibration

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Hydraulic gauge pressure, indicating and electrical output devices	Comparison Method acc. to DKD R6-1-2014 PSC-SOP-PR-01 and PSC-SOP-PR-03	$0 \text{ MPa} \leq p \leq 4 \text{ MPa}$	12 kPa	Laboratory/ Customer Premises
		$4 \text{ MPa} < p \leq 70 \text{ MPa}$	24 kPa	
Gas differential pressure, indicating and electrical output devices	Comparison Method acc. to DKD R6-1-2014 PSC-SOP-PR-01 and PSC-SOP-PR-02	$4.9 \text{ kPa} \leq p < 4.9 \text{ kPa}$	17 Pa	
Gas negative gauge pressure, indicating and electrical output devices	Comparison Method acc. to DKD R6-1-2014 PSC-SOP-PR-01 and PSC-SOP-PR-02	$94 \text{ kPa} \leq p < 0$	1.2 kPa	

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**Mass Calibration**

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Mass/ Weights	Comparison Method according to OIML R 111- 2004  Using E2 class standard weights 1mg -10 kg	500 g - 2 kg	8.2 mg	Laboratory
		5 kg – 10 kg	82 mg	

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### Balance Calibration

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Electronic Balance	According to OIML R-76-2006 and cg 18-2015 Using E2 class standard 1 mg - 10 kg	0 to 200 g	0.3 mg	Customer Premises
		> 200 g up to 2 kg	8.3 mg	
		> 2 kg up to 20 kg	90 mg	
	According to OIML R-76-2006 and cg 18-2015 Using M1 class standard 5 kg – 300 kg	> 20 kg to 60 kg	2.8 g	Customer Premises
		> 60 kg to 150 kg	5.8 g	
		> 150 kg to 300 kg	11.1 g	

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### Volume Calibration

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Calibration Field/ Measuring Quality	Calibration Method	Range and Specification	Calibration Measurement Capability (CMC)*	Location
Micropipette	Gravimetric Method According to ISO 4787/Euramet Cg-19	10 µl to 100 µl	0.95 µl	Laboratory
		> 100 µl to 1000 µl	1.9 µl	
		> 1000 µl to 10000 µl	20 µl	
Volumetric glass ware, Measuring cylinder Measuring Flask Burettes Pipettes Beakers	Gravimetric Method According to ISO 4787 Cg-19	0 to 10 ml	0.08 ml	Laboratory
		> 10 ml to 100 ml	0.48 ml	
		> 100 ml to 2000 ml	3.2 ml	

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