

SCOPE OF ACCREDITATION TO ISO/IEC 17025-2017 & KS Q ISO/IEC 17025-2017

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CALIBRATION

Valid To : Jun. 2, 2021.

Accreditation No : KC09-232(1/4)

In recognition of the successful completion of the KOLAS evaluation process,
accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
102. Linear dimension								
10210	Extensometers, linear displacement transducers	Y						
10216	Height gauges/measuring machines	Y						
106. Various dimensional								
10601	Inside/outside/gear tooth calipers, caliper gauges	Y						
10605	Dial/digital gauges	Y						
10612	Inside micrometers	Y						
10613	Outside micrometers	Y						
10617	Standard sieves	N						
201. Mass								
20102	Auto-hopper scale balances	Y						
20105	Counter beam balances	Y						
20109	Electric balances	Y						
20112	Platform scale balances	Y						
20116	Weights	Y						
202. Force								
20203	Tension/Compression testing machines	Y						
206. Volume								
20601	Volumetric glasswares	N						
20605	Concrete air content meters	N						

Note

1. This laboratory provides calibration services in permanent standard laboratory and at on-site.
2. Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-008.
3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.
4. Calibration and Measurement Capability (CMC) means capabilities provided by accredited calibration laboratories. It expresses the lowest uncertainty of measurement that can be achieved during a calibration. CMC normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k=2$.
5. Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than CMC on scope of accreditation in general.

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Extensometers, linear displacement transducers	10210	(0 ~ 100) mm	$\sqrt{0.9^2 + (0.044 \times l_0)^2}$ μm (l_0 : mm)	Gauge Block, Dial Gauge Tester/PH-I206
Height gauges/measuring machines	10216	(0 ~ 600) mm	$\sqrt{2.3^2 + (0.004 \times l_0)^2}$ μm (l_0 : mm)	Caliper Gauge, Gauge Block/PH-I207

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Inside/outside/gear tooth calipers, caliper gauges	10601	(0 ~ 600) mm	$\sqrt{9.6^2 + (0.007 \times l_0)^2}$ μm (l_0 : mm)	Caliper Gauge, Gauge Block/PH-I201
Dial/digital gauges	10605	(0 ~ 1) mm (1 ~ 25) mm (25 ~ 50) mm	0.52 μm 3.3 μm 3.7 μm	Dial Gauge Tester, Gauge Block/PH-I202
Inside micrometers	10612	(5 ~ 100) mm	$\sqrt{1.4^2 + (0.002 \times l_0)^2}$ μm (l_0 : mm)	Gauge Block/PH-I203
Outside micrometers	10613	(0 ~ 100) mm	$\sqrt{0.94^2 + (0.007 \times l_0)^2}$ μm (l_0 : mm)	Gauge Block/PH-I204
Standard sieves Wire rod diameter Sieve opening	10617	(0 ~ 10) mm (0 ~ 125) mm	3.2 μm 5.0 μm	Measuring microscopes/PH-I205

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Auto-hopper scale balances	20102	(0 ~ 20) kg (20 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg (500 ~ 1 000) kg (1 000 ~ 2 000) kg (2 000 ~ 5 000) kg (5 000 ~ 12 000) kg	2.0 g 10 g 20 g 51 g 0.10 kg 0.20 kg 0.53 kg 1.1 kg	Weights/PH-I004
Counter beam balances	20105	(0 ~ 311) g (311 ~ 2 610) g (2.61 ~ 20) kg	5.0 mg 50 mg 0.50 g	Weights/PH-I001

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Electric balances	20109	(0 ~ 32) g	81 μg	Weights/PH-I003, PH-I006

		(32 ~ 210) g (210 ~ 310) g (310 ~ 1 220) g (1.22 ~ 2) kg (2 ~ 10) kg (10 ~ 20) kg (20 ~ 41) kg (41 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg (500 ~ 1 000) kg (1 000 ~ 2 000) kg (2 000 ~ 5 000) kg (5 000 ~ 10 000) kg (10 000 ~ 30 000) kg (30 000 ~ 60 000) kg	0.22 mg 0.24 mg 1.2 mg 2.1 mg 5.8 mg 12 mg 26 mg 1.8 g 4.5 g 9.2 g 18 g 88 g 0.18 kg 0.48 kg 6.0 kg 12 kg	
Platform scale balances	20112	(0 ~ 5) kg (5 ~ 10) kg (10 ~ 20) kg (20 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg (500 ~ 1 000) kg (1 000 ~ 2 000) kg	0.20 g 0.50 g 1.0 g 5.0 g 10 g 20 g 50 g 0.10 kg 0.20 kg	Weights/PH-I002
Weights	20116	(1 mg ~ 20 kg) 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg	(F ₂) 20 µg 20 µg 20 µg 20 µg 20 µg 21 µg 21 µg 21 µg 21 µg 22 µg 23 µg 24 µg 26 µg 28 µg 33 µg 0.12 mg 0.13 mg 0.16 mg 1.2 mg 1.3 mg 7.8 mg 8.2 mg 9.4 mg 15 mg	Standard weights, Mass comparator/PH-I005

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Weights	20116	(500 ~ 1 000) kg 500 kg 1 000 kg	(M ₂) 31 g 32 g	Standard weights, Mass comparator/PH-I005

202. Force

