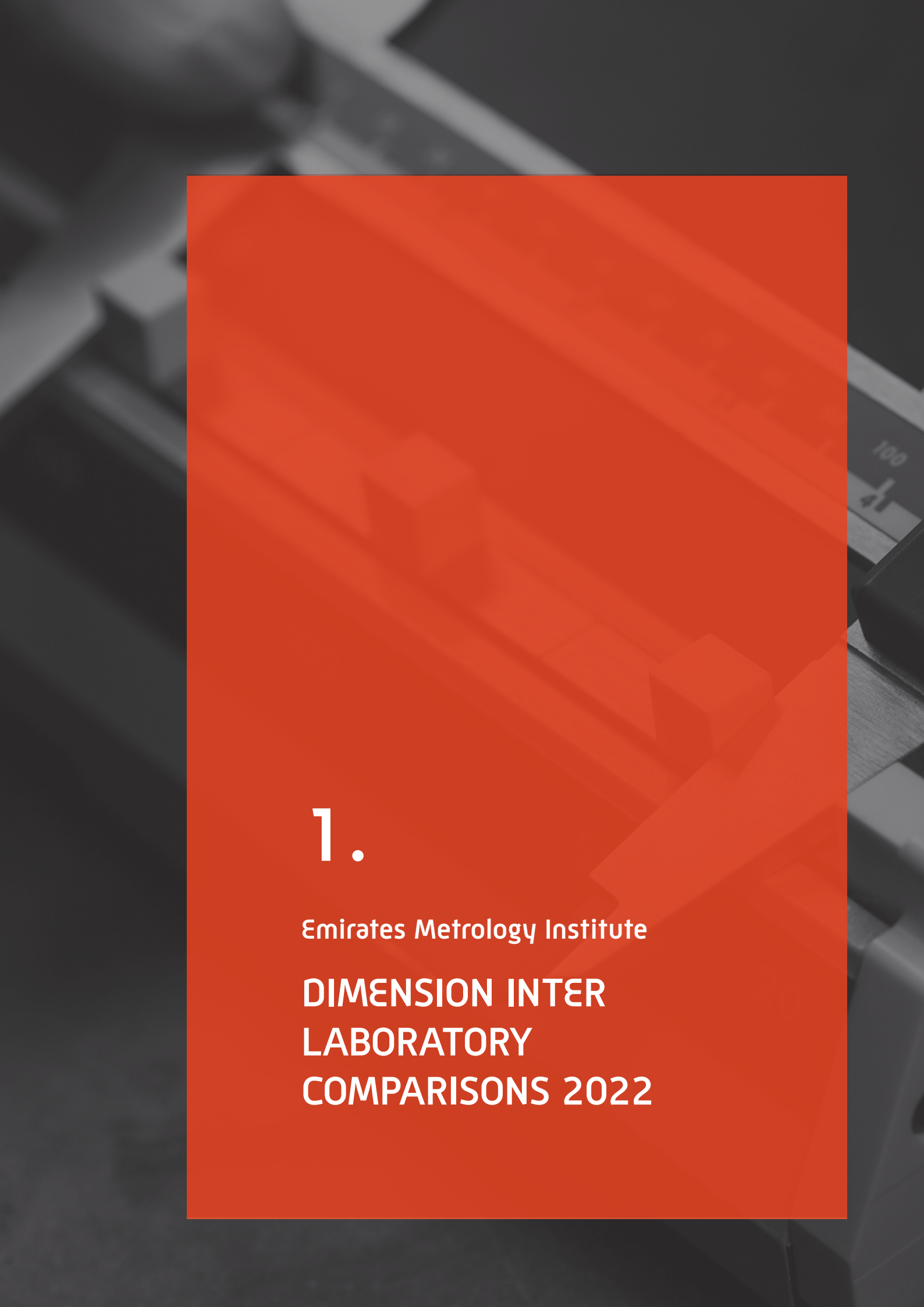
معهد الإمارات للمترولوجيا
Emirates Metrology Institute

مجلس أبوظبي للجودة والمطابقة
ABU DHABI QUALITY AND CONFORMITY COUNCIL

Emirates Metrology Institute

INTER LABORATORY COMPARISONS 2022

emi.qcc.gov.ae



1.

Emirates Metrology Institute

DIMENSION INTER LABORATORY COMPARISONS 2022

Inter-laboratory Comparison Program of the Dimension Laboratory 2022

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in electrical calibration.

OUTCOMES

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES

ISO/IEC 17043:2010 Conformity assessment — General requirements for proficiency testing

PILOT LAB

Dimension Laboratory/ Emirates Metrology Institute (EMI/ QCC)

Schedule

Comparisons will be provided on request

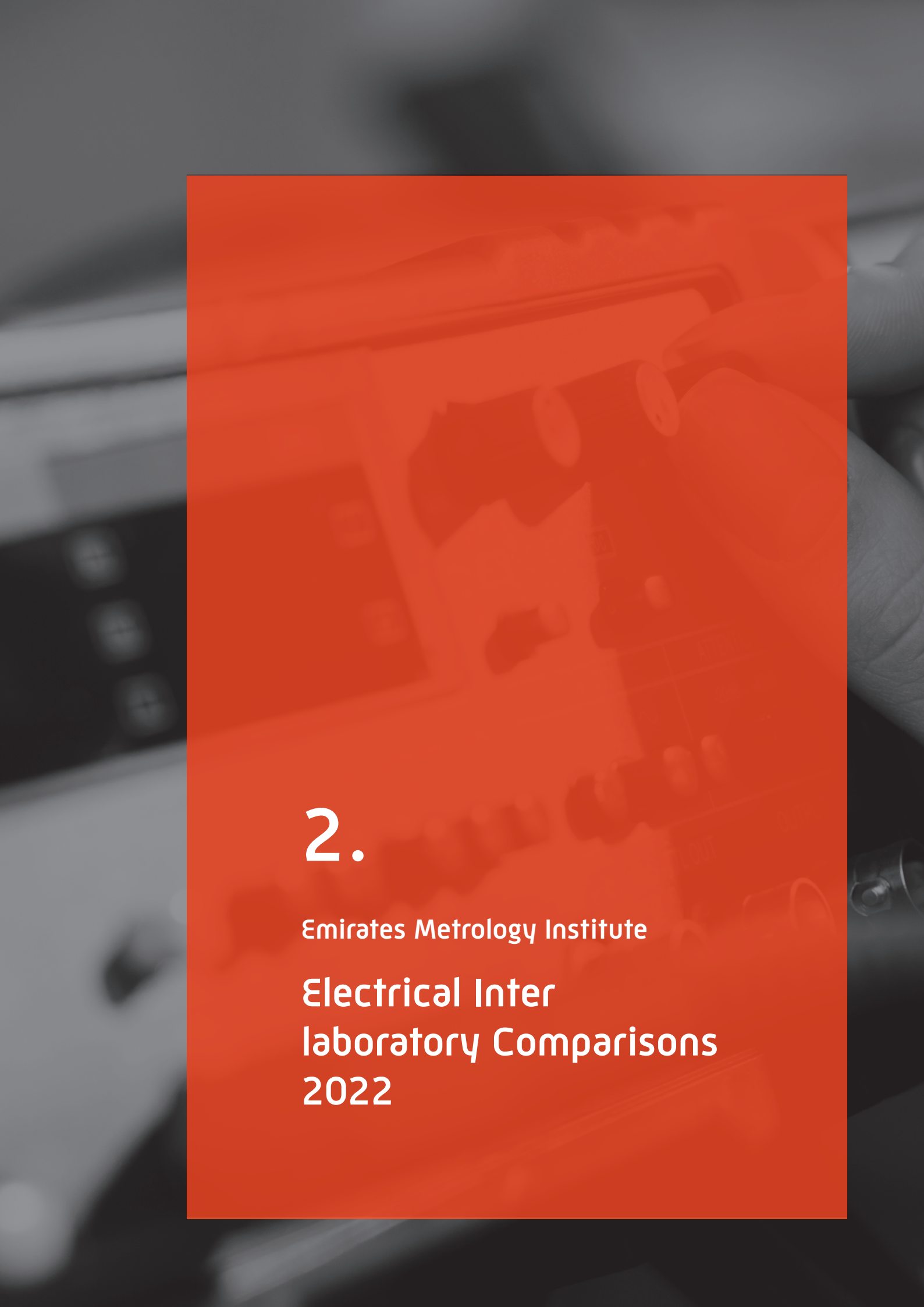
REGISTRATION FOR THE ILC:

Please contact: EMI Customer Service
Email: emi.customerservice@qcc.gov.ae

SCHEDULE

ILC Code	Transfer Standard	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
D-1	Micrometer	1500*	**1000***
D-2	Caliper upto 300 mm	1500*	1000*
D-3	Caliper 300-600 mm	1800*	1200*
D-4	Dial gauge	1500*	1000*
D-5	protector	1500*	1000*
D-6	Gauge block (depend in how many pieces)		

*Prices are subject to change



2.

Emirates Metrology Institute

Electrical Inter laboratory Comparisons 2022

Inter-laboratory Comparison Programme of the Electrical, Time and Frequency Laboratory 2022

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in electrical calibration.

OUTCOMES:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES:

ISO/IEC 17043:2010 Conformity assessment — General requirements for proficiency testing

PILOT LAB:

Electrical, Time and Frequency Laboratory/ Emirates Metrology Institute (EMI/ QCC)

Schedule

Comparisons will be provided on request

REGISTRATION FOR THE ILC:

Please contact: EMI Customer Service

Email: emi.customerservice@qcc.gov.ae

SCHEDULE

ILC Code	Transfer Standard	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
E-1	Digital Multimeter 6.5 digit (Fluke 8846A)	3900*	2300*
E-2	Tachometer (Monarch PLT200)	1200*	800*
E-3	Stopwatch (Casio HS-80TW)	1200*	800*
E-4	Process Calibrator (Fluke 726)	5100*	3400*
E-5	Insulation meter (Fluke 1507)	1200*	800*
E-6	Clamp Meter (Fluke 376 FC)	1650*	1100*
E-7	Calibrator (Fluke 9100)	5700*	3800*
E-8	Energy meter (Active energy class 0.2S, Reactive energy class 0.5S)	3200*	2135*
E-9	Temperature Indicator and Simulator (Fluke 726)	1500*	1000*
E-10	Frequency Counter (TBD)	5400*	3600*
E-11	Oscilloscope (Agilent DSO7032B)	1800*	1200*

*Prices are subject to change

3.

Emirates Metrology Institute

INTERLABORATORY COMPARISON Temperature Lab

T-1 Inter-laboratory Comparison in Calibration of a Temperature Chamber

ILC PURPOSE

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

T-1

ILC DESCRIPTION

This will be a bilateral comparison on the calibration of a Temperature Chamber in the range -40 to 140 °C. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD

The temperature indication of the chamber will be calibrated using a set of temperature sensors placed on the center and on the 8 corners of its working volume. One additional sensor, having a high emissivity value, will be placed on the center of the working volume, next to the central sensor, in order to estimate the IR radiation influence on the air temperature measurements.

laboratories are asked to calibrate the chamber at the agreed set points, according to their calibration procedures. At least 30 readings are required, after the temperature stabilization of the chamber has been reached, taken with an interval of one minute between them.

In the case of Multilateral comparison if any laboratory cannot perform all set points. They can perform only those for which they have capability.

ARTIFACT/TRANSFER STANDARD

The transfer standard will be a Temperature Chamber provided by either the pilot laboratory or the participant laboratory.

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in temperature calibration.

OUTCOMES

Outcomes could be one of the following:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES

DKD-R 5-7 Guideline "Calibration of Climatic Chambers", Edition 07/2004, English translation 02/2009.

DATES/SCHEDULE

On Request

PILOT LAB

Temperature and Humidity Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC

Please contact: Dr. Miltiadis Anagnostou

Email: miltiadis.anagnostou@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
Fees	3600 AED*	3600 AED + travel expenses*

*Prices are subject to change

T-2 Inter-laboratory Comparison in Calibration of a Digital Thermometer

ILC PURPOSE:

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

T-2

DESCRIPTION:

This will be a bilateral comparison on the calibration of a Digital thermometer in the range -80 to 1100 °C. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

Laboratory is asked to calibrate the thermometer at the agreed set points, according to their calibration procedure. For every set point at least 10 readings are required for the reference and the test thermometer taken in a time interval of 10 minutes after the stability conditions of their bath or block calibrator have been reached.

In the case of Multilateral comparison if any laboratory cannot perform all set points. They can perform only those for which they have capability.

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be a Digital thermometer provided by either the pilot laboratory or the participant laboratory.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in temperature calibration.

OUTCOMES:

Outcomes could be one of the following:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES:

DKD-R 5-1 Guideline, "Calibration of Resistance Thermometers", Edition 10/2003, English translation 02/2009.

DATES/SCHEDULE:

On Request

PILOT LAB:

Temperature and Humidity Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

Please contact: Dr. Miltiadis Anagnostou

Email: miltiadis.anagnostou@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
Calibration Range		
-80 to 250 °C	1500 AED up to 5 set points + 300 per additional set point*	1000 AED up to 5 set points + 200 per additional set point*
-80 to 550 °C	1650 AED up to 5 set points + 300 per additional set point*	*1100 AED up to 5 set points + 200 per additional set point
-80 to 1100 °C	1800 AED up to 5 set points + 450 per additional set point*	1200 AED up to 5 set points + 300 per additional set point*

*Prices are subject to change

T-3 Inter-laboratory Comparison in Calibration of a Platinum Resistance Thermometer

ILC PURPOSE:

- To provide calibration laboratories with a tool for independent validation and confirmation of their performance.
- Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE: T-3

ILC DESCRIPTION:

This will be a bilateral comparison on the calibration of a Platinum Resistance Thermometer in the range -80 to 600 °C. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

Laboratory is asked to calibrate the Platinum Resistance Thermometer at the agreed set points, according to their calibration procedure. For every set point at least 10 readings are required for the reference and the test thermometer taken in a time interval of 10 minutes after the stability conditions of their bath or block calibrator have been reached.

Main quantity which will be measured is the electrical resistance of the Platinum Resistance Thermometer (PRT) with the reference temperatures of the comparison at the agreed set points, according to their calibration procedure. The electrical resistance measurements will be performed with four terminals using 1mA current. If another current is used, it must be specified, and the self-heating must be determined.

Participants may perform any initial checks on the platinum resistance thermometers that would be performed for a normal calibration. In the case of an unexpected instrument characteristics, the pilot shall be informed as soon as possible.

An initial ice / water triple point resistance measurement must be performed and communicated to the pilot lab. The pilot lab will decide whether an annealing of the thermometer is necessary or not. If an annealing is decided, then an annealing for 4 hours (at a temperature higher than the Maximum one) must follow and the ice / water triple point of the thermometers must be measured again. Equivalent change of the thermometers should be less than 10 mK. If change is larger than this number, then the annealing must be repeated.

The lab must calibrate the thermometers in comparison with its own reference thermometers using baths or block calibrators. The measurements must be performed from the lower to the higher temperatures and then down to 100 °C and 0.01 °C to account for the hysteresis of the thermometers. At each set-point, and after the stability of the temperature has been reached, at least 10 measurements must be taken in a period of 10 minutes for the reference temperature and the electrical resistance of the test thermometers. The mean and standard deviation of these measurements must be determined and reported.

In the case of Multilateral comparison If the scope/capability of a laboratory does not cover the whole range of this comparison, the laboratory is allowed to limit measurement values according to their capability. In this case, the Pilot institute (EMI, UAE) should be informed by the participant laboratory.

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be a Platinum Resistance Thermometer provided by either the pilot laboratory or the participant laboratory.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in temperature calibration.

OUTCOMES:

Outcomes could be one of the following:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES:

DKD-R 5-1 Guideline, "Calibration of Resistance Thermometers", Edition 10/2003, English translation 02/2009.

DATES/SCHEDULE:

On Request

PILOT LAB:

Temperature and Humidity Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

Please contact: Dr. Miltiadis Anagnostou

Email: miltiadis.anagnostou@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
Fees	2811 AED up to 5 set points + 450 per additional set point*	1874 AED up to 5 set points + 300 per additional set point*

*Prices are subject to change

T-4 Inter-laboratory Comparison in Calibration of a Thermo-hygrometer

ILC PURPOSE:

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE: T-4

ILC DESCRIPTION:

This will be a bilateral comparison on the calibration of a Thermo-hygrometer in the range 10 to 70 °C

Air temperature and 15 to 95 %RH Relative Humidity. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

Laboratory is asked to calibrate the Thermo-hygrometer at the agreed relative humidity/air temperature set points, according to their calibration procedure. Two sets of measurements should be performed one in increasing and one in decreasing humidity order. For every set point at least ten readings are required for the reference and the test thermo-hygrometer taken in a time interval of 10 minutes after the stability conditions of their chamber have been reached.

In the case of Multilateral comparison if any laboratory cannot perform all set points. They can perform only those for which they have capability.

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be a Thermo-hygrometer provided by either the pilot laboratory or the participant laboratory.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in temperature calibration.

OUTCOMES:

Outcomes could be one of the following:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES:

DKD-R 5-7 Guideline "Calibration of Climatic Chambers", Edition 07/2004, English translation 02/2009.

DATES/SCHEDULE:

On Request

PILOT LAB:

Temperature and Humidity Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

Please contact: Dr. Miltiadis Anagnostou

Email: miltiadis.anagnostou@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
Parameter		
Relative Humidity	3000 AED*	2000 AED*
Air temperature	1587AED*	1058 AED*
Both	4587 AED*	3058 AED*

*Prices are subject to change

T-5 Inter-laboratory Comparison in Infrared Thermometer

ILC PURPOSE:

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE: T-5

ILC DESCRIPTION:

This will be a bilateral comparison on the calibration of an Infrared Thermometer in the range -10 to 500 °C. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

The Laboratory is asked to calibrate the Infrared thermometer at the agreed set points, according to their calibration procedure. For every set point at least ten readings are required for the reference and the test IR thermometer taken in a time interval of 10 minutes after the stability conditions of the source has been reached. EMI and The Participant should agree in the emissivity setting for both the source and the transfer Infrared thermometer under test beside the distance between the Infrared thermometer and the surface of the source during the measurements.

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be an Infrared Thermometer provided by either the pilot laboratory or the participant laboratory.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in temperature calibration.

OUTCOMES:

Outcomes could be one of the following:

- Inter-laboratory Comparison detailed report
- Inter-laboratory Comparison certificate for successful participation

REFERENCES:

ASTM: E2847 – 14: Standard Test Method for Calibration and Accuracy Verification of Wideband Infrared Thermometers.

DATES/SCHEDULE:

On Request

PILOT LAB:

Temperature and Humidity Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

Please contact: Dr. Miltiadis Anagnostou

Email: miltiadis.anagnostou@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer Standard Provided by Participant (AED)
Fees	1875 AED*	1250 AED*

*Prices are subject to change

4.

Emirates Metrology Institute

INTERLABORATORY COMPARISONS 2022-MVF

Inter-laboratory Comparison in Calibration of Electronic Balances (NAWI)

ILC PURPOSE

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

M-22/1

ILC DESCRIPTION

This will be a biilateral comparison on the calibration of the indication of an electronic balance (capacity and resolution TBA).

The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the E_n statistic.

MEASUREMENT METHOD

Tests for the repeatability, eccentric load error and scale verification (linearity) shall be performed. The tests shall be in accordance with the procedure EURAMET cg-18 v.4 (2015).

ARTIFACT/TRANSFER STANDARD

The transfer standard will be a balance provided by the pilot laboratory or participant laboratory. Participants will be required to perform their measurements at a balance location using their own mass standards.

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in balance calibration.

OUTCOMES

Inter-laboratory Comparison detailed report

REFERENCES

- ISO/IEC 17043:2010 Conformity assessment - General requirements for proficiency testing
- EURAMET cg-18 v.4/2015 "Guidelines on the Calibration of Non-automatic Weighing Instruments".

DATES/SCHEDULE

On Request

PILOT LAB

Mass-Volume-Flow Lab/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC

Please contact: Mrs. Asma Al Hosani

Email: aq.alhosani@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Electronic Balance		
Electronic Balance (NAWI) (Ultra micro and Semi micro balance)	2500 AED*	1650 AED*
Electronic Balance (NAWI) (capacity up to 200 g)	1500 AED*	1000 AED*
Electronic Balance (NAWI) (capacity up to 10 kg)	1800 AED*	1200 AED*
Electronic Balance (NAWI) (capacity up to 60 kg)	2250 AED*	1500 AED*
Electronic Balance (NAWI) (capacity up to 120 kg)	4500 AED*	3000 AED*
Electronic Balance (NAWI) (capacity up to 500 kg)	6000 AED*	4000 AED*
Electronic Balance (NAWI) (capacity up to 1000 kg)	9000 AED*	6000 AED*

*Prices are subject to change

Inter-laboratory Comparison in Calibration of Mass Standard

ILC PURPOSE

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

M-22/2

ILC DESCRIPTION

This will be a biilateral comparison on the calibration of the indication of Mass Standard (capacity and resolution TBA). The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the E_n statistic.

MEASUREMENT METHOD

By Comparison

ARTIFACT/TRANSFER STANDARD

The transfer standard will be a mass standard provided by the pilot laboratory or participant laboratory. The pilot laboratory will also be responsible for monitoring the stability of the transfer standard.

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in balance calibration.

OUTCOMES

Inter-laboratory Comparison detailed report

REFERENCES

- ISO/IEC 17043:2010 Conformity assessment - General requirements for proficiency testing
- OIML R 111-1: 2004, "Weights of classes E1, E2, F1, F2, M1, M1–2, M2, M2–3 and M3".

DATES/SCHEDULE

On Request

PILOT LAB

Mass-Volume-Flow Lab/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC

Please contact: Mrs. Asma Al Hosani

Email: aq.alhosani@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Mass Standard		
Mass standard (nominal values 1 mg to 10 kg)- Class E	1200 AED*	800 AED*
Mass standard (nominal value 20 kg or 50 kg) - Class E	1500 AED*	1000 AED*
Mass standard (nominal values 1 mg to 10 kg) - Class F	700 AED*	450 AED*
Mass standard (nominal value 20 kg or 50 kg) - Class F	900 AED*	600 AED*

*Prices are subject to change

Inter-laboratory Comparison in Calibration of Piston Operated Volumetric Instruments (µ-pipettes)

ILC PURPOSE

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

M-22/3

ILC DESCRIPTION

This will be a multilateral comparison on the calibration of a variable volume micro-pipette (capacity and resolution TBA). The pilot laboratory shall be responsible for assigning the reference value(s). Performance will be assessed through the E_n statistic.

MEASUREMENT METHOD

The gravimetric method as described in "Piston-operated volumetric apparatus - Part 6: Gravimetric methods for the determination of measurement error" (2002) shall be used by the participants. Uncertainty shall be estimated in accordance to ISO/TR 20461, "Determination of uncertainty for volume measurements using gravimetric method" (2000).

ARTIFACT/TRANSFER STANDARD

The transfer standard will be a variable volume micro-pipette provided by the pilot laboratory or participant laboratory. The pilot laboratory will also be responsible for monitoring the stability of the transfer standard.

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in volume calibration.

OUTCOMES

Inter-laboratory Comparison detailed report

OTHER REFERENCES

- ISO/IEC 17043:2010 Conformity assessment - General requirements for proficiency testing

DATES/SCHEDULE

On Request

PILOT LAB

Mass-Volume-Flow Lab/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC

Please contact: Mrs. Asma Al Hosani

Email: aq.alhosani@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Volume (Pipette & Glassware)		
Fixed volume micro-pipette up to 10 ml	900 AED*	600 AED*
Variable volume micro-pipette 100 µl	2100 AED*	1400 AED*
Variable volume micro-pipette 1000 µl	2100 AED*	1400 AED*
Variable volume micro-pipette 5000 µl	2100 AED*	1400 AED*

*Prices are subject to change

Inter-laboratory Comparison in Calibration of Glassware

ILC PURPOSE

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE

M-22/4

ILC DESCRIPTION

This will be a multilateral comparison on the calibration of a glassware (type, capacity and resolution TBA).

The pilot laboratory shall be responsible for assigning the reference value(s). Performance will be assessed through the E_n statistic.

MEASUREMENT METHOD

By Comparison

ARTIFACT/TRANSFER STANDARD

The transfer standard will be a glassware provided by the pilot laboratory or participant laboratory. The pilot laboratory will also be responsible for monitoring the stability of the transfer standard.

TARGET PARTICIPANTS

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in volume calibration.

OUTCOMES

Inter-laboratory Comparison detailed report

OTHER REFERENCES:

- ISO/IEC 17043:2010 Conformity assessment - General requirements for proficiency testing

DATES/SCHEDULE

On Request

PILOT LAB

Mass-Volume-Flow Lab/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC

Please contact: Mrs. Asma Al Hosani

Email: aq.alhosani@qcc.gov.ae

PARTICIPATION FEES

Transfer Standard Provider	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Volume (Pipette & Glassware)		
Volumetric glassware- Burette up to 50 ml	1500 AED*	1000 AED*
Volumetric glassware- Flask up to 1000 ml	1500 AED*	1000 AED*
Volumetric glassware- Measuring Cylinder up to 2000 ml	1500 AED*	1000 AED*

*Prices are subject to change

5.

Emirates Metrology Institute

INTERLABORATORY COMPARISONS 2022-FTP

P-1 Inter-laboratory Comparison of a digital pressure gauge in gauge mode

ILC PURPOSE:

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE:

P-22/1 to P-22/7

ILC DESCRIPTION:

This will be a bilateral comparison on the calibration of digital hydraulic pressure gauge. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

Calibration of the measurement accuracy of the pressure gauge. The calibration shall be performed using the laboratory's procedures in accordance with either DKD-R 6-1:2014 [2] or EURAMET Calibration Guide No. 17 Version 4.0 (04/2019) [3]. If the laboratory cannot perform all tests, it can perform only those for which it has capability.

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be an Additel 681 or Crystal XP2i, provided by the pilot laboratory. If the range or resolution of the listed transfer standards are not sufficient, the customer may request use of different transfer standard.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in pressure calibration.

OUTCOMES:

Inter-laboratory Comparison detailed report

REFERENCES:

- ISO/IEC 17043:2010 Conformity assessment-General requirements for proficiency testing
- DKD-R 6-1:2014
- EURAMET Calibration Guide No. 17 Version 4.0 (04/2019)

DATES/SCHEDULE:

On Request based on availability of the artifact/transfer standard

PILOT LAB:

Force, Torque, and Pressure Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

- https://emi.qcc.gov.ae/
- For Inquiries please contact: EMI Customer Service
- Email: emi.customerservice@qcc.gov.ae

PARTICIPATION FEES

ILC Code	Transfer Standard	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Digital Pressure Gauge			
P-22/1	Hydraulic Pressure Gauge (full scale value/resolution) 0 kPa to 7,000 kPa resolution 0.1 kPa	1500 AED*	Upon Request
P-22/2	Hydraulic Pressure Gauge (full scale value/resolution) 0 kPa to 70,000 kPa resolution 1 kPa	1500 AED*	Upon Request
P-22/3	Hydraulic Pressure Gauge (full scale value/resolution) 0 kPa to 280,000 kPa resolution 1 kPa	1500 AED*	Upon Request
P-22/4	Gas Pressure Guage (full scale value/resolution) -100 kPa to 100 kPa resolution 0.01 kPa	1500 AED*	Upon Request
P-22/5	Gas Pressure Guage (full scale value/resolution) -100 kPa to 700 kPa resolution 0.01 kPa	1500 AED*	Upon Request
P-22/6	Gas Pressure Guage (full scale value/resolution) 0 kPa to 7,000 kPa resolution 0.1 kPa	1500 AED*	Upon Request
P-22/7	Gas Pressure Guage (full scale value/resolution) 0 kPa to 14,000 kPa resolution 1 kPa	1500 AED*	Upon Request

F-1 Inter-laboratory Comparison of a force transducer with indicator in compression

ILC PURPOSE:

To provide calibration laboratories with a tool for independent validation and confirmation of their performance.

Facilitate laboratories in meeting ISO 17025 accreditation requirements for use of external quality control measures.

ILC CODE:

F-22/1 to F-22/2

ILC DESCRIPTION:

This will be a bilateral comparison on the calibration of force transducer. The pilot laboratory shall be responsible for monitoring the stability of the transfer standard and assigning the reference value(s). Performance will be assessed through the En statistic.

MEASUREMENT METHOD:

Calibration of the measurement accuracy of the force transducer. The calibration shall be performed using the laboratory's procedures in accordance with ISO 376:2011 – Calibration of force-proving instruments used for the verification of uniaxial testing machines [2].

ARTIFACT/TRANSFER STANDARD:

The transfer standard will be provided by the participating laboratory subject to ability to fit to EMI Force Standard Machine.

TARGET PARTICIPANTS:

Calibration laboratories which are accredited or seeking accreditation or need to validate their competency in pressure calibration.

OUTCOMES:

Inter-laboratory Comparison detailed report

REFERENCES:

- ISO/IEC 17043:2010 Conformity assessment - General requirements for proficiency testing
- ISO 376:2011 – Calibration of force-proving instruments used for the verification of uniaxial testing machines

DATES/SCHEDULE:

On request and subject to transfer standard availability, accessories, and ability to fit transfer standard in the pilot lab Force Standard Machine

PILOT LAB:

Force, Torque, and Pressure Laboratory/ Emirates Metrology Institute (EMI/ QCC)

REGISTRATION FOR THE ILC:

- https://emi.qcc.gov.ae/
- For Inquiries please contact: EMI Customer Service
- Email: emi.customerservice@qcc.gov.ae

PARTICIPATION FEES

ILC Code	Transfer Standard	Transfer Standard Provided by EMI (AED)	Transfer StandardProvided by Participant (AED)
Digital Pressure Gauge			
F-22/1	ISO 376:2011 Calibration of force sensors with indicators in compression (full scale value) 500 to 1000 kN	Currently Not Available	3000 AED*
F-22/2	ISO 376:2011 Calibration of force sensors with indicators in compression (full scale value) >1000 kN to 5000 kN	Currently Not Available	4000 AED*

Contact Us

T. 024065703 - 024066557

E. emi.customerservice@qcc.gov.ae

W. emi.qcc.gov.ae

or

مركز اتصال حكومة أبوظبي
ABU DHABI CONTACT CENTRE
CONTACT. ABUDHABI