



Annex (1)

Updated on: 2019-02-19

To the Accreditation Certificate No. **JAS Cal. - 003** Dated **2016-12-04**

For Calibration Laboratory

At the Arab Center for Engineering Studies

Scope of Accreditation

Calibration of Mass, Balances & Force

Permanent Calibration

Measurand	Measuring Range	Calibration and measurement Capability (CMC) ^a	Calibration Methods/ Standards/ Remarks
<i>Mass</i>			
<i>MASS CLASS F2</i>	100 g 200 g 500 g 1 kg 2 kg 5 kg	0.21 mg 0.38 mg 0.58 mg 1.26 mg 1.51 mg 4.01 mg	WI-011 according to OIML R111-1 e04, , using calibrated reference weight Class F1
<i>MASS CLASS M1, M2, M3</i>	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	0.06 mg 0.07 mg 0.09 mg 0.11 mg 0.13 mg 0.16 mg 0.26 mg 0.51 mg 1.25 mg 2.50 mg 5.00 mg 12.50 mg 25.00 mg	WI-011 according to OIML R111-1 e04, , using calibrated reference weight Class F2



On-Site Calibration

Measurand	Measuring Range	Calibration and measurement Capability (CMC) ^a	Calibration Methods/ Standards/ Remarks
<i>Non-automatic weighing instruments Class II, III, and IIII</i>	1 mg > to ≤ 200 g 200 g > to ≤ 500 g 500 g > to ≤ 2000 g 2000 g > to ≤ 5000 g 5 Kg > to ≤ 10 Kg 10 Kg > to ≤ 31 Kg	0.20 mg 0.56 mg 3.00 mg 11.00 mg 21.00 mg 32.00 mg	WI-012
<i>FORCE</i>			
<i>Force-machines in compression mode Class I, II, and III</i>	10-100 KN 200-2000 KN	0.325 % Fi 0.168 % Fi	WI-014 according to ISO 7500-1:15 Using load cell capacity 100KN, resolution 0.01KN and load cell capacity 3000KN, resolution 0.01KN

a) The reported CMCs are expressed at approximately the 95 % level of confidence, using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

List of employees in the laboratory who are technically responsible for issuing the calibration certificates in the scope of accreditation:

- 1- Dr. Ibrahim Al-Assi Head of Calibration Center
- 2- Eng. Mahmoud Abu Al-Dosh. Calibration Engineer
- 3- Eng. Ahmad Al-Abbadi. Calibration Engineer