



Annex (1)

Updated on: 2018-11-26

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, Non-automatic Balances and Force

Measurand	Measuring Range	Calibration and measurement Capability (CMC)/ Uncertainty of measurement	Calibration Methods/ Standards/ Remarks
<i>Permanent</i>			
MASS CLASS F2	100 g	0.21 mg	WI-011 according to OIML R111-1 e04, , using calibrated reference weight Class F1
	200 g	0.38 mg	
	500 g	0.58 mg	
	1 kg	1.3 mg	
	2 kg	1.5 mg	
	5 kg	4.0 mg	
MASS CLASS M1, M2, M3	1 g	0.06 mg	WI-011 according to OIML R111-1 e04, , using calibrated reference weight Class F2
	2 g	0.07 mg	
	5 g	0.09 mg	
	10 g	0.11 mg	
	20 g	0.13 mg	
	50 g	0.16 mg	
	100 g	0.26 mg	
	200 g	0.51 mg	
	500 g	1.3 mg	
	1 kg	2.5 mg	
	2 kg	5.0 mg	
5 kg	13 mg		
10 kg	25 mg		
<i>Onsite</i>			
Non-automatic weighing instruments Class II, III*, and III*	1 g to 200 g	0.20 mg	WI-012
	> 200 g to 500 g	0.56 mg	
	> 500 g to 2000 g	3.0 mg	
	> 2000 g to 5000 g	11 mg	
	>5 kg to 10 kg	21 mg	
>10 kg to 31 Kg	32 mg		



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<i>FORCE (force-machines in compression mode) Class I, II, and III</i>	10-100 kN	0.325 % Fi	WI-014 according to ISO 7500-1:15 Using load cell capacity 100 kN, resolution 0.01 kN and load cell capacity 3000 kN, resolution 0.01 kN
	200-2000 kN	0.168 % Fi	

**Except Class III & IIII Onsite / Permanent.*

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