

Scope of Accreditation for Calibration

Accreditation No. : CALIBRATION 0156

Laboratory Status : Permanent Site Temporary Mobile

Field of Measurement	Parameter/Range/Item	Calibration and Measurement Capability*	Standard/Technique/ Method/Equipment/Remark
2. Mass (cont.)	Mechanic balance (cont.)		In-house method : CM-051 based on UKAS LAB 14 : 2006
	> 7 kg to 30 kg	12 g	
	> 30 kg to 50 kg	17 g	
	> 50 kg to 100 kg	58 g	
	> 100 kg to 300 kg	58 g	
3. Temperature	> 300 kg to 500 kg	83 g	
	Digital thermometer with sensor		In-house method : CM-003 by comparison with PRT in liquid bath and dry block
	Resistance Temperature		
	Detector (RTD)		
	-30 °C to 50 °C	0.14 °C	
	> 50 °C to 400 °C	0.19 °C	
	> 400 °C to 600 °C	0.21 °C	
	Thermocouple		In-house method : CM-003 by comparison with PRT in liquid bath and dry block
	-30 °C to 50 °C	0.31 °C	
	> 50 °C to 100 °C	0.51 °C	
	> 100 °C to 150 °C	0.73 °C	
	> 150 °C to 200 °C	1.0 °C	
	> 200 °C to 250 °C	1.2 °C	
> 250 °C to 300 °C	1.5 °C		
> 300 °C to 400 °C	2.0 °C		

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* expressed as an uncertainty (+) which for k = 2, providing a level of confidence of approximately 95%

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3. Temperature (cont.)	Digital thermometer with sensor		In-house method : CM-003 by comparison with PRT in liquid bath and dry block
	Thermocouple (cont.)		
	> 400 °C to 500 °C	2.4 °C	
	> 500 °C to 600 °C	2.8 °C	
	Dry block		In-house method : CM-005 by comparison with PRT
	-30 °C to 100 °C	0.20 °C	
	> 100 °C to 200 °C	0.21 °C	
	> 200 °C to 300 °C	0.22 °C	
	> 300 °C to 400 °C	0.26 °C	
	> 400 °C to 600 °C	0.29 °C	
	Platinum Resistance Thermometer (PRT)		In-house method : CM-012 by comparison with semi-SPRT in liquid bath and dry block
	-30 °C to 50 °C	0.16 °C	
> 50 °C to 400 °C	0.14 °C		
> 400 °C to 600 °C	0.19 °C		
Liquid bath		In-house method : CM-007 by comparison with PRT	
-30 °C to 250 °C	0.29 °C		

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3. Temperature (cont.)	Data logger with sensor		In-house method : CM-010 by comparison with PRT in liquid bath and dry block
	Resistance Temperature Detector (RTD)		
	-30 °C to 50 °C	0.15 °C	
	> 50 °C to 400 °C	0.19 °C	
	> 400 °C to 600 °C	0.22 °C	
	Thermocouple		
	-30 °C to 50 °C	0.34 °C	
	> 50 °C to 100 °C	0.51 °C	
	> 100 °C to 150 °C	0.73 °C	
	> 150 °C to 200 °C	0.95 °C	
	> 200 °C to 250 °C	1.2 °C	
	Liquid bath (5 positions)		In-house method : CM-008 by comparison with data logger with thermocouple sensor
	30 °C to 50 °C	0.60 °C	
> 50 °C to 100 °C	0.80 °C		
> 100 °C to 150 °C	1.2 °C		
> 150 °C to 200 °C	1.5 °C		
Liquid in glass thermometer		In-house method : CM-004 by comparison with semi-SPRT and PRT in liquid bath	
Total immersion			
-30 °C to 125 °C	0.16 °C		

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3. Temperature (cont.)	Liquid in glass thermometer (cont.) Partial immersion -30 °C to 50 °C > 50 °C to 125 °C	0.17 °C 0.18 °C	In-house method : CM-004 by comparison with semi-SPRT in liquid bath
4. Volumetric	Volumetric flask 10 ml 25 ml 50 ml 100 ml 200 ml 250 ml 500 ml 1 000 ml Measuring pipet 0.1 ml to 1 ml 0.1 ml to 5 ml 0.1 ml to 10 ml 0.1 ml to 25 ml	6.0 µl 7.0 µl 10 µl 18 µl 34 µl 40 µl 66 µl 0.13 ml 3.0 µl 3.0 µl 4.0 µl 6.5 µl	In-house method : CM-052 based on ASTM E 542-01 In-house method : CM-055 based on ASTM E 542-01

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