

PT. CALTESYS INDONESIA

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Temperature

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes	
1	Liquid In Glass Thermometer	-30 °C ~ 0 °C	0.19 °C	in-house procedure TG-01		
		0 °C ~ 100 °C	0.11 °C			
		100 °C ~ 200 °C	0.11 °C			
2	Temperatur Sensor with display unit	-30 °C ~ 0 °C	0.19 °C	in-house procedure TI-01		
		0 °C ~ 100 °C	0.11 °C			
		100 °C ~ 200 °C	0.11 °C			
		200 °C ~ 1000 °C	3.2 °C			
3	Temperature Indicator (without sensor) for Thermocouple Sensor :			in-house procedure INTC-01		
		K-type	0 °C ~ 1200 °C			0.09 °C
		J-type	0 °C ~ 1100 °C			0.09 °C
		T-type	0 °C ~ 400 °C			0.1 °C
		R-type	0 °C ~ 1600 °C			0.7 °C
		S-type	0 °C ~ 1600 °C			0.7 °C
	for Resistance Thermometer Sensor	0 °C ~ 800 °C	0.09 °C	in-house procedure RTD-01		
4	Thermocouple	-30 °C ~ 200 °C	0.15 °C	in-house procedure EVT-01		
		200 °C ~ 1000 °C	3.2 °C			
5	Resistance Thermometer	-30 °C ~ 0 °C	0.19 °C	in-house procedure TTP-01		
		0 °C ~ 250 °C	0.11 °C			
6	Temperatur Enclosure			in-house procedure WOB-01, OB-01, FN-01		
		Waterbath	0 °C ~ 100 °C			0.2 °C
		Oilbath	0 °C ~ 200 °C			0.2 °C
		Oven, Incubator	0 °C ~ 200 °C			0.4 °C
		Oven, Incubator Furnace	200 °C ~ 500 °C 0 °C ~ 1000 °C			0.7 °C 2.1 °C
7	Thermohygrometer	30 % ~ 40 %	2.3 %RH	in-house procedure THM-01		
		40 % ~ 60 %	2.4 %RH			
		60 % ~ 70 %	2.5 %RH			
		70 % ~ 95 %	2.6 %RH			
		15 °C ~ 40 °C	0.4 °C			
8	Radiation Thermometer (Infrared)	0 °C ~ 100 °C	1.4 °C	in-house procedure IRT-01		
		100 °C ~ 200 °C	1.4 °C			
		200 °C ~ 300 °C	1.7 °C			
		300 °C ~ 400 °C	2.2 °C			
		400 °C ~ 500 °C	2.7 °C			
		500 °C ~ 650 °C	3.2 °C			

Mass

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Weights (conventional mass)	0.001 g ~ 5 g	0.02 mg	in-house procedure MW-01	
		5 g ~ 20 g	0.03 mg		
		50 g	0.04 mg		
		100 g	0.08 mg		
		200 g	0.12 mg		
		500 g	1.1 mg		
		1 kg	1.2 mg		
		2 kg	9 mg		
		5 kg	12 mg		
		10 kg	70 mg		
		20 kg	0.14 g		
		30 kg	0.26 g		

Mass (Continued)

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
2	Balance (electronic, mechanic)	0 g ~ 20 g	0.03 mg	in-house procedure MWB-03	
		20 g ~ 50 g	0.07 mg		
		50 g ~ 100 g	0.13 mg		
		100 g ~ 200 g	0.3 mg		
		200 g ~ 500 g	0.9 mg		
		500 g ~ 1000 g	1.4 mg		
		1000 g ~ 2000 g	2.5 mg		
		2000 g ~ 3000 g	4.8 mg		
		3000 g ~ 5000 g	12 mg		
		5 kg ~ 10 kg	0.1 g		
		10 kg ~ 30 kg	0.2 g		
		30 kg ~ 60 kg	0.6 g		
		60 kg ~ 100 kg	1 g		
		100 kg ~ 300 kg	7 g		
		300 kg ~ 500 kg	30 g		
		500 kg ~ 1000 kg	60 g		
		1000 kg ~ 3000 kg	120 g		
3000 kg ~ 5000 kg	300 g				
5000 kg ~ 10000 kg	600 g				

Volume

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Volumetric Glassware; Volumetric Measures	0 mL ~ 5 mL	0.001 mL	in-house procedure MVL-01	
		5 mL ~ 25 mL	0.005 mL		
		25 mL ~ 100 mL	0.01 mL		
		100 mL ~ 500 mL	0.07 mL		
		500 mL ~ 1000 mL	0.13 mL		
		1000 mL ~ 5000 mL	0.63 mL		
		5000 mL ~ 20000 mL	13 mL		

Density

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Hydrometer	0.650 g/cm ³ ~ 1.000 g/cm ³	0.001 g/cm ³	in-house procedure HD-01	
		1.000 g/cm ³ ~ 1.500 g/cm ³	0.0014 g/cm ³		
		1.500 g/cm ³ ~ 2.000 g/cm ³	0.0016 g/cm ³		

Force

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Universal Testing Machine	0 kgf ~ 500 kgf	0.7 kgf	in-house procedure UTM - 01	
		0 kgf ~ 2000 kgf	1.4 kgf		
		0 kgf ~ 10000 kgf	1.5 kgf		
		0 kgf ~ 30000 kgf	4 kgf		
2	Push Pull Gauge	0 gf ~ 500 gf	0.08 gf	in-house procedure PP-01	
		0 gf ~ 1000 gf	0.17 gf		
		0 kgf ~ 10 kgf	0.004 kgf		
		0 kgf ~ 20 kgf	0.005 kgf		
		0 kgf ~ 50 kgf	0.01 kgf		
		1 kgf = 9,80665 N			
3	Load Cell / Proving Ring	5 kN	0.02 kN	in-house procedure LC-01	
		20 kN	0.1 kN		
		100 kN	0.24 kN		
		300 kN	1.05 kN		

Torque

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Torque Wrench	0 Nm ~ 10 Nm	0.06 Nm	in-house procedure TWM-01	
		10 Nm ~ 50 Nm	0.2 Nm		
		50 Nm ~ 100 Nm	0.4 Nm		
		100 Nm ~ 500 Nm	2 Nm		
		500 Nm ~ 1100 Nm	4.3 Nm		
2	Torque Meter	0 kgf.m ~ 1 kgf.m	0.023 kgf.m	in-house procedure TWM-01	
		1 kgf.m ~ 5 kgf.m	0.023 kgf.m		
		5 kgf.m ~ 10 kgf.m	0.024 kgf.m		
		10 kgf.m ~ 20 kgf.m	0.024 kgf.m		
		20 kgf.m ~ 50 kgf.m	0.04 kgf.m		
		50 kgf.m ~ 100 kgf.m	0.12 kgf.m		
		100 kgf.m ~ 150 kgf.m	0.04 kgf.m		

Pressure

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Dead Weight Tester	0.4 kgcm ⁻² ~ 700 kgcm ⁻²	0.1 %	in-house procedure TK DWT-01	
2	Pressure Test Gauge (hydraulic)	0.4 bar ~ 100 bar	0.15 %	in-house procedure TK TGG-01	
		0.4 bar ~ 250 bar	0.15 %		
		0.4 bar ~ 600 bar	0.15 %		
3	Pressure Gauge (hydraulic)	0 bar ~ 1 bar	0.003 bar	in-house procedure TK PG-01	
		0 bar ~ 100 bar	1.1 bar		
		0 bar ~ 250 bar	1.2 bar		
		0 bar ~ 600 bar	4.3 bar		
		(1 bar = 10 ⁵ Pa)			
4	Pressure Gauge (pneumatic)	0 bar ~ 1 bar	0.003 bar	in-house procedure TK PG-01	
		0 bar ~ 5 bar	0.02 bar		
		0 bar ~ 10 bar	0.04 bar		
		0 psi ~ 300 psi	0.8 psi		
		(1 psi = 6894.76 Pa)			
5	Vacuum Gauge	0 cmHg ~ -76 cmHg	0.3 cmHg	in-house procedure TK VG-01	
		(1 cmHg = 1 333, 224 Pa)			

Hardness

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Hardness Tester	0 HRB ~ 100 HRB	1.2 HRB	in-house procedure HT-01	
		0 HRC ~ 70 HRC	0.3 HRC		
		0 HV ~ 900 HV	3.5 HV		
2	Durometer	0 gf ~ 850 gf	1.3 gf	in-house procedure HDT-01	
		0 skala ~ 100 skala	0.8 skala		

Length

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Outside Micrometer	0 mm ~ 100 mm	1 µm	in-house procedure ML-16	
		100 mm ~ 1000 mm	6 µm		
2	Inside Micrometer	0 mm ~ 100 mm	1 µm	in-house procedure ML-15	
		100 mm ~ 1000 mm	6 µm		
3	Depth Micrometer	0 mm ~ 25 mm	1.5 µm	in-house procedure ML-10	
		25 mm ~ 150 mm	6 µm		
4	Height Gauge	0 mm ~ 1500 mm	19 µm	in-house procedure ML-17	
5	Calliper	0 mm ~ 1500 mm	17 µm	in-house procedure ML-09	
6	Thickness Gauge	0 mm ~ 100 mm	6 µm	in-house procedure ML-14	
7	Steel Ruler	0 mm ~ 1000 mm	670 µm	in-house procedure ML-03	
8	Bevel Protractor	0° ~ 90°	3 sec	in-house procedure ML-13	
9	Feeler Gauge	0 mm ~ 5 mm	1 µm	in-house procedure ML-11	
10	Measuring Microscope: Scale deviation	200 mm x 200 mm	0.0022 mm	in-house procedure ML-19	
11	Measuring Projector (Profile Projector) Scale deviation	200 mm x 200 mm	0.0022 µm	in-house procedure ML-20	

Length (Continued)

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
12	Dial Indicator	0 mm ~ 25 mm	1.6 µm	in-house procedure ML-04	
13	Dial Gauge Tester	0 mm ~ 5 mm	0.4 µm	in-house procedure ML-05	
		0 mm ~ 25 mm	0.6 µm		
14	Roll Meter	0 m ~ 1 m	0.7 mm	in-house procedure ML-06	
		1 m ~ 10 m	2 mm		
		10 m ~ 20 m	3 mm		
		20 m ~ 100 m	7 mm		
		100 m ~ 200 m	10 mm		
15	Cylinder Gauge (Bore Gauge)	0 mm ~ 25 mm	1.7 µm	in-house procedure ML-18	
16	Pin Gauge	0 mm ~ 25 mm	1 µm	in-house procedure ML-01	
17	Thread Plug Gauge: average diameter	M 1 ~ M 150	4.7 µm	in-house procedure ML-02	
	Thread Plug Gauge: Major & minor diameter	M 1 ~ M 150	1.8 µm		
	Thread Plug Gauge: Pitch Angel	M 1 ~ M 150	0.08 °		
18	Snap Gauge	0 mm ~ 300 mm	0.9 µm	in-house procedure ML-07	
19	Theodolite:	0 ° ~ 360 °	5 sec	in-house procedure ML-08	
	Liquid level sensitivity	0 mm/m ~ 0.5 mm/m	0.01 mm/m		
20	Gap Gauge	0 mm ~ 300 mm	0.6 µm	in-house procedure ML 29	
21	Autolevel: optic level verification	100 mm/m ~ 300 mm/m	5 sec	in-house procedure ML-12	
	Liquid level sensitivity	0 mm/m ~ 0.5 mm/m	0.01 mm/m		
22	Gauge Block	0.5 mm ~ 10 mm	0.13 µm	in-house procedure ML-30	
		10 mm ~ 25 mm	0.15 µm		
		25 mm ~ 50 mm	0.17 µm		
		50 mm ~ 75 mm	0.19 µm		
		75 mm ~ 100 mm	0.22 µm		
23	Water Pass	0 mm/m ~ 0.5 mm/m	0.01 mm/m	in-house procedure ML-31	
24	Ring Gauge	0 mm ~ 300 mm	1.8 µm	in-house procedure ML-21	
25	Test Sieve	0 mm ~ 10 mm	3 µm	in-house procedure ML-22	
26	Coating Thickness	0 mm ~ 6 mm	0.7 µm	in-house procedure ML-23	
27	Scale Loupe	0 mm ~ 20 mm	3 µm	in-house procedure ML-25	
28	Thickness Film	0 mm ~ 6 mm	1.1 µm	in-house procedure ML-27	
29	Plug Gauge	0 mm ~ 25 mm	1 µm	in-house procedure ML-28	
		25 mm ~ 250 mm	2 µm		
30	Graticule/ Calibration Grid	0 mm ~ 200 mm	3 µm	in-house procedure ML-25	
31	Three Point Internal Micrometer/ Holtest	0 mm ~ 100 mm	1 µm	in-house procedure ML-26	
32	Standard Scale	0 mm ~ 300 mm	4.9 µm	in-house procedure ML-46	
33	Head Micrometer	0 mm ~ 25 mm	0.9 µm	in-house procedure ML-44	
34	Pitch Gage	0.2 mm ~ 7 mm	4.7 µm	in-house procedure ML-47	
35	Depth Gauge	0 mm ~ 300 mm	12 µm	in-house procedure ML-48	
36	Taper Gauge	10 mm ~ 200 mm	4.7 µm	in-house procedure ML-38	
37	Roughness Tester	0.05 µmRa ~ 12.5 µmRa	0.062 µmRa	in-house procedure ML-41	
38	Ultrasonic Thickness Meter	0.5 mm ~ 100 mm	1.2 µm	in-house procedure ML-37	
39	Radius Gauge	0.1 mm ~ 250 mm	4.6 µm	in-house procedure ML-42	
40	Microscope	0.002 mm ~ 10 mm	2.9 µm	in-house procedure ML-32	
41	Coordinate Measuring Machine	500 mm	1.5 µm	in-house procedure ML-45	
42	Angle Block	0.2 ° ~ 90 °	2.4 sec	in-house procedure ML-24	
43	3-Wire	0.17 mm ~ 3.2 mm	4.6 µm	in-house procedure ML-43	
44	Setting Bar	25 mm ~ 300 mm	3.5 µm	in-house procedure ML-33	
45	Straight Edge (Straightness)	0 mm ~ 500 mm	2.6 µm	in-house procedure ML-36	
	(Ketinggian)		6.6 µm		
	(Keperallelan)		2.3 µm		
	(Lebar)		6.6 µm		
46	Square (Squareness)	0 mm ~ 600 mm	3.7 µm	in-house procedure ML-35	
	(Straightness)	0 mm ~ 600 mm	2.6 µm		
	(Keperallelan)	0 mm ~ 600 mm	1.9 µm		
47	Step Gauge	20 mm ~ 600 mm	3.8 µm	in-house procedure ML-34	

Length (Continued)

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
48	V-Block (Flatness-Permukaan bawah)	0 mm ~ 150 mm	2.7 μm	in-house procedure ML-40	
	(Flatness-Permukaan V)				
	(Keparallelan-permukaan bawah & cylinder permukaan V block))				
	(Kemiringan-jalur V dari permukaan bawah) (Keparallelan-diantara permukaan sis & cylinder permukaan V block)				
49	Surface Plate	1000 mm x 1000 mm	2.5 μm	in-house procedure ML-39	

Electrical

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	DC Current Source	0.1 mA ~ 10 mA	1.5 μA	in-house procedure ECL-01	
		10 mA ~ 100 mA	15 μA		
		0.1 A ~ 1 A	350 μA		
		1 A ~ 3 A	6.5 mA		
2	AC Current Source	f = 45 Hz ~ 1kHz		in-house procedure ECL-01	
		0.1 A ~ 1 A	1.3 mA		
		1 A ~ 3 A	38 mA		
3	Resistor	1 Ω ~ 10 Ω	15 mΩ	in-house procedure ECL-01	
		10 Ω ~ 100 Ω	24 mΩ		
		100 Ω ~ 1000 Ω	150 mΩ		
		1 kΩ ~ 10 kΩ	1.5 Ω		
		10 kΩ ~ 100 kΩ	17 Ω		
		100 kΩ ~ 1 MΩ	200 Ω		
		1 MΩ ~ 10 MΩ	5 kΩ		
4	AC Ammeter	f = 45 Hz ~ 1 kHz		in-house procedure ECL-02	
		10 μA ~ 200 μA	0.5 μA		
		200 μA ~ 2 mA	4.2 μA		
		2 mA ~ 20 mA	42 μA		
		20 mA ~ 200 mA	0.42 mA		
		200 mA ~ 2 A	4.2 mA		
		f = 45 Hz ~ 500 Hz			
2 A ~ 20 A	46 mA				
5	DC Ammeter	0 μA ~ 200 μA	0.1 μA	in-house procedure ECL-03	
		200 μA ~ 2 mA	0.4 μA		
		2 mA ~ 20 mA	2.7 μA		
		20 mA ~ 200 mA	39 μA		
		200 mA ~ 2 A	0.7 mA		
6	AC Voltmeter	45 Hz ~ 10 kHz		in-house procedure ECL-04	
		1 mV ~ 20 mV	7 μV		
		20 mV ~ 200 mV	230 μV		
		200 mV ~ 2 V	2 mV		
		2 V ~ 20 V	90 mV		
		20 V ~ 200 V	200 mV		
		45 Hz ~ 1 kHz			
200 V ~ 1020 V	1.2 V				
7	DC Voltmeter	0 mV ~ 100 mV	10 μV	in-house procedure ECL-03	
		100 mV ~ 1000 mV	60 μV		
		1 V ~ 10 V	0.6 mV		
		10 V ~ 100 V	6.0 mV		
8	Ohm Meter	0.1 Ω	1.2 mΩ	in-house procedure ECL-05	
		1 Ω	1.2 mΩ		
		10 Ω	1.2 mΩ		
		100 Ω	1.2 mΩ		
		1 kΩ	0.13 Ω		
		10 kΩ	0.9 Ω		
100 kΩ	8.5 Ω				

Electrical (continued)

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
8	Ohm Meter (cont'd)	1 MΩ	210 Ω	in-house procedure ECL-05	
		10 MΩ	7.4 kΩ		
		100 MΩ	630 kΩ		
9	Inductance Meter	f = 1 kHz		in-house procedure ECL-08	
		1 mH	0.07 mH		
		10 mH	0.17 mH		
		19 mH	0.26 mH		
		29 mH	0.37 mH		
		50 mH	0.59 mH		
		100 mH	1.2 mH		
		1 H	11 mH		
10	Capacitance Meter	f = 1 kHz		in-house procedure ECL-09	
		1 nF	0.029 nF		
		10 nF	0.076 nF		
		20 nF	0.13 nF		
		50 nF	0.29 nF		
		100 nF	0.55 nF		
		1 μF	8.4 nF		
		10 μF	0.13 μF		
11	AC Watt Meter	V = 20 V ~ 1000 V; I ≥ 1 A		in-house procedure ECL-10	
		f = 45 Hz ~ 400 Hz; cos φ = 1			
		20 W ~ 200 W	1.3 W		
		200 W ~ 2 kW	14 W		
		2 kW ~ 20 kW	88 W		
		20 kW ~ 200 kW	2.4 kW		
200 kW ~ 1000 kW	12 kW				
12	AC HV Source	f = 50 Hz		in-house procedure ECL-11	
		1 kV ~ 10 kV	240 V		
13	DC HV Source	1 kV ~ 10 kV	210 V	in-house procedure ECL-12	
14	Insulation Tester	100 kΩ	234 Ω	in-house procedure ECL-13	V maks = 1000 V
		250 kΩ	250 Ω		
		500 kΩ	720 Ω		
		1 MΩ	1.3 kΩ		
		10 MΩ	23 kΩ		
		100 MΩ	680 kΩ		
15	AC Clamp Meter	f = 50 Hz ~ 60 Hz		in-house procedure ECL-14	
		1 A ~ 40 A	0.3 A		
		40 A ~ 200 A	1.4 A		
16	DC Clamp Meter (Hall Effect Clamp)	1 A ~ 40 A	0.5 A	in-house procedure ECL-15	
		40 A ~ 200 A	2 A		
		200 A ~ 1000 A	7.6 A		
17	AC High Current Source	f = 50 Hz ~ 60 Hz		in-house procedure ECL-16	
		10 A ~ 200 A	5.4 A		
		200 A ~ 400 A	7.9 A		
		400 A ~ 600 A	13 A		
		600 A ~ 800 A	17 A		
		800 A ~ 1000 A	21 A		
18	DC High Current Source	10 A ~ 200 A	5.4 A	in-house procedure ECL-16	
		200 A ~ 400 A	7.9 A		
		400 A ~ 600 A	13 A		
		600 A ~ 800 A	17 A		
		800 A ~ 1000 A	21 A		
		10 A ~ 200 A	5.4 A		
19	DC Voltage Source	1 mV ~ 100 mV	0.15 mV	in-house procedure ECL-01	
		100 mV ~ 1 V	0.12 mV		
		1 V ~ 10 V	0.46 mV		
		10 V ~ 100 V	6.52 mV		
		100 V ~ 1000 V	75.9 mV		
		100 V ~ 1000 V	75.9 mV		

Electrical (continued)

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
20	AC Voltage Source	f = 10 Hz ~ 20kHz		in-house procedure ECL-01	
		1 mV ~ 100 mV	0.14 mV		
		100 mV ~ 1 V	1.43 mV		
		1 V ~ 10 V	14.3 mV		
		10 V ~ 100 V	143 mV		
		100 V ~ 750 V	1.07 V		
21	DC Current Source	0.1 mA ~ 10 mA	9.2 μ A	in-house procedure ECL-01	
		10 mA ~ 100 mA	92 μ A		
		0.1 A ~ 1 A	1.4 mA		
		1 A ~ 3 A	5.8 mA		
22	AC Current Source	f = 10 Hz ~ 5kHz		in-house procedure ECL-01	
		0.1 A ~ 1 A	2.3 mA		
		1 A ~ 3 A	10.1 mA		
23	Resistor	1 Ω ~ 10 Ω	1.6 m Ω	in-house procedure ECL-01	
		10 Ω ~ 100 Ω	10.4 m Ω		
		100 Ω ~ 1000 Ω	0.14 Ω		
		1 k Ω ~ 10 k Ω	0.86 Ω		
		10 k Ω ~ 100 k Ω	11.9 Ω		
		100 k Ω ~ 1 M Ω	0.17 k Ω		
		1 M Ω ~ 10 M Ω	6.7 k Ω		
		10 M Ω ~ 100 M Ω	257 k Ω		

Time and Frequency

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	Frequency Meter	10 Hz	2 mHz	in-house procedure ECL-07	
		100 Hz	3 mHz		
		1 kHz	20 mHz		
		10 kHz	0.2 Hz		
		100 kHz	2 Hz		
		1 MHz	20 Hz		
		10 MHz	200 Hz		
2	Frequency Source	3 Hz ~ 10 Hz	2 mHz	in-house procedure ECL-01	Voutput: 100 mV ~ 100 V
		10 Hz ~ 100 Hz	20 mHz		
		100 Hz ~ 1 kHz	200 mHz		
		1 kHz ~ 10 kHz	2 Hz		
		10 kHz ~ 100 kHz	20 Hz		
		100 kHz ~ 300 kHz	60 Hz		
3	Stopwatch	1 s ~ 600 s	0.81 s	in-house procedure STP-01	
4	RPM-Meter (optical sensor)	240 rpm ~ 60000 rpm	0.004 %	in-house procedure TCH-01	
5	RPM-Meter (mechanical)	1000 rpm ~ 5000 rpm	25 rpm	in-house procedure TCH-02	

Analytical Instruments

No.	Instrument to be calibrated	Measurement Range	BMC	Methods/Specifications	Notes
1	pH Meter	0 pH ~ 14 pH	0.02 pH	in-house procedure PH-01	
2	Viscosity	5 cP ~ 104320 cP	1.2 %	in-house procedure VIS-01	
3	Conductivity	84 μ S ~ 1.4 mS	7 μ S	in-house procedure CD-01	
		1.4 mS ~ 5 mS	28 μ S		
		5 mS ~ 12.8 mS	71 μ S		
		12.8 mS ~ 111.8 mS	0.6 mS		
4	Spectrophotometer	$\lambda = 590$ nm		in-house procedure FTM-01	
		Transmittance	0 %T ; 10 %T 50.0 %T ; 100 %T		
	Panjang Gelombang (λ)	405 nm ; 532 nm 792 nm	1 nm		
5	Moisture Meter	0 % ~ 100 %	0.01 %	in-house procedure MM-01	

Best Measurement Capability is stated as *Expanded Uncertainty* at approximately 95% confidence level, calculated using coverage factor of k = 2, includes uncertainty contribution due to reference standards used by the laboratory, measurement process at the laboratory, and contribution due to typical characteristic of nearly ideal device under calibration respective to the laboratory. The actual characteristic of device under calibration shall also be considered for individual calibration certificate issued by the laboratory.