

Schedule

Issue date: 2 April 2020
Valid until: 18 May 2021



NO: SMM 711

(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)

Page: 1 of 7

LABORATORY LOCATION:
(PERMANENT LABORATORY)



**FACULTY OF ENGINEERING
UNIVERSITY PUTRA MALAYSIA
43400 UPM SERDANG
SELANGOR
MALAYSIA**

FIELDS OF TESTING:

CHEMICAL AND MECHANICAL

FIELD OF CALIBRATION:

MASS

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

MATERIAL CHARACTERIZATION LABORATORY (MCL)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Surface Water (Sample analyzed as submitted)	Ni, Zn and Cu	APHA 311B (21 st Edition)

Signatory:

1. **Shafizah binti Masuri**

IKM No.: M/3597/6354/13

NO: SMM 711(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)

Page: 2 of 7

MATERIAL CHARACTERIZATION LABORATORY (MCL)**SCOPE OF TESTING: CHEMICAL**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Amorphous, partially crystalline materials	Glass Transition Temperature (T _g) of amorphous, partially crystalline materials from 30 °C to 300 °C	ASTM 1356-98 Standards Test Method for Assignment of the Glass Transition Temperature by Differential Scanning Calorimeter or Differential Thermal Analysis

Signatories:

1. **Shafizah binti Masuri**
2. **Dr. Dayang Radiah Binti Awang Biak**
3. **Assoc. Prof. Dr. Norhafizah binti Abdullah**

IKM No.: M/3597/6354/13

NO: SMM 711(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)

Page: 3 of 7

STRENGTH OF MATERIALS LABORATORY (SML)**SCOPE OF TESTING: MECHANICAL**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Metallic materials form of rectangular and circular cross sections	Determination of the tensile properties for metallic materials: i. Tensile Strength ii. Elongation after fracture Load: 5 kN to 100 kN	ASTM E8/E8M-15a Standard Test Methods for Tension Testing of Metallic Materials (excluding preparation of specimen)

Signatory:

1. **Dr. Eris Elianddy bin Supeni**

NO: SMM 711(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)**AEROSPACE STRUCTURE LABORATORY (ASL)****SCOPE OF TESTING: MECHANICAL**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques	
Metallic materials in Rectangular Cross Section Form	Fatigue Strength	ASTM E466-15	} INOPERATIVE

Signatories:

1. Dr. Noorfaizal Yidris
2. Prof. Ir. Dr. Faizal Mustapha
3. Assoc. Prof. Dr. Dayang Laila Abang Abdul Majid

NO: SMM 711

(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)

Page: 5 of 7

CONSTRUCTION MATERIALS LABORATORY (CML)**SCOPE OF TESTING: MECHANICAL**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Concrete Cube	Compressive Strength Up to 5000 kN	MS EN 12390-3: 2012 BS EN 12390-3: 2009

Signatories:

1. **Dr. Noor Azline Mohd Nasir**
2. **Ernaleza Mahsum**

NO: SAMM 711(Issue 2, 3 March 2020 replacement
of SAMM 279 dated 29 August 2018)

Page: 6 of 7

* The expanded uncertainties are based on an estimated confidence probability of approximately 95% and have a coverage factor of $k=2$ unless stated otherwise.

MASS METROLOGY LABORATORY (MML)**SCOPE OF CALIBRATION: MASS**

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(\pm)*	Remarks
Standard Weights	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	0.02 mg 0.02 mg 0.03 mg 0.03 mg 0.04 mg 0.06 mg 0.1 mg 0.2 mg 0.4 mg 0.8 mg 2 mg 4 mg 9 mg	Calibrated using Standard Weight Sets and Mass Comparator Based on OIML R111-1

Signatories:

1. **Assoc. Prof. Ir Dr. B.T. Hang Tuah Baharudin**
2. **Dr. Khairil Anas Md Rezali**

NO: SMM 711(Issue 2, 3 March 2020 replacement
of SMM 279 dated 29 August 2018)

Page: 7 of 7

MASS METROLOGY LABORATORY (MML)**SCOPE OF CALIBRATION: MASS****SITE CALIBRATION: CATEGORY I**

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(\pm)*	Remarks
Electronic Balances	Up to 200 g	0.6 mg	Calibrated using Standard Weight
	Up to 1 kg	1 mg	
	Up to 10 kg	11 mg	

Signatories:

1. **Assoc. Prof. Ir Dr. B.T. Hang Tuah Baharudin**
2. **Dr. Khairil Anas Md Rezali**