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CENTRE FOR RESEARCH SERVICES Level 2, Research Management & Innovation Complex University of Malaya 50603 WP Kuala Lumpur, 50603, WILAYAH PERSEKUTUAN KUALA LUMPUR MALAYSIA  ACCREDITED SINCE: 10 NOVEMBER 2024 FIELD(S) OF TESTING: NUCLEIC ACID  SITE: I . SITE LABORATORY(HQ): INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING: MECHANICAL 2. SITE LABORATORY(HQ): ALGAE RESEARCH LABORATORY INSTITUTE OF OCEAN AND
Malaya 50603 WP Kuala Lumpur , 50603, WILAYAH PERSEKUTUAN KUALA LUMPUR MALAYSIA  ACCREDITED SINCE: 10 NOVEMBER 2024 FIELD(S) OF TESTING: NUCLEIC ACID  SITE: I . SITE LABORATORY(HQ): INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING: MECHANICAL
WILAYAH PERSEKUTUAN KUALA LUMPUR MALAYSIA  ACCREDITED SINCE: 10 NOVEMBER 2024 FIELD(S) OF TESTING: NUCLEIC ACID  SITE: I . SITE LABORATORY(HQ): INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING: MECHANICAL
MALAYSIA  MACCREDITED SINCE:  10 NOVEMBER 2024  FIELD(S) OF TESTING:  NUCLEIC ACID  SITE:  INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
ACCREDITED SINCE: 10 NOVEMBER 2024 FIELD(S) OF TESTING: NUCLEIC ACID SITE: I. SITE LABORATORY(HQ): INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING: MECHANICAL
FIELD(S) OF TESTING:  NUCLEIC ACID  SITE:  I. SITE LABORATORY(HQ):  INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
FIELD(S) OF TESTING:  NUCLEIC ACID  SITE:  I. SITE LABORATORY(HQ):  INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
FIELD(S) OF TESTING:  NUCLEIC ACID  SITE:  I. SITE LABORATORY(HQ):  INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING:  MECHANICAL
I . SITE LABORATORY(HQ):  INFRA ANALYSIS LABORATORY RESEARCH SERVICES DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING:  MECHANICAL
SERVICES, LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING: MECHANICAL
LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA  FIELD(S) OF TESTING:  MECHANICAL
UNIVERSITI MALAYA, MALAYSIA FIELD(S) OF TESTING: MECHANICAL
MALAYSIA FIELD(S) OF TESTING: MECHANICAL
FIELD(S) OF TESTING: MECHANICAL
THE EABORATORY (110):
EARTH SCIENCES (IOES),
B207, BLOCK B, LEVEL 2, ADVANCE STUDIES COMPLEX
UNIVERSITI MALAYA,
MALAYSIA
FIELD(S) OF TESTING : BIOLOGICAL
B. SITE LABORATORY(HQ): ANTIVIRAL RESEARCH LABORATORY (AVL) TROPICAL
INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE
(TIDREC),
LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
MALAYA,,
MALAYSIA
FIELD(S) OF TESTING : BIOLOGICAL
1. SITE LABORATORY(HQ): VACCINE RESEARCH LABORATORY (VRL) TROPICAL
INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE
(TIDREC),
LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
MALAYA,,
MALAYSÍA
FIELD(S) OF TESTING : BIOLOGICAL
5 . SITE LABORATORY(HQ) : SURVEILLANCE LABORATORY (SL 1) TROPICAL INFECTIOUS
DISEASES RESEARCH & EDUCATION CENTRE (TIDREC),
LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
MALAYA,,
MALAYSIA
FIELD(S) OF TESTING: BIOLOGICAL
FIELD(S) OF TESTING:  BIOLOGICAL  SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS
FIELD(S) OF TESTING:  BIOLOGICAL  SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC),
BIOLOGICAL  S. SITE LABORATORY(HQ):  DISEASES RESEARCH & EDUCATION CENTRE (TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
BIOLOGICAL  S. SITE LABORATORY(HQ):  SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI MALAYA,,
BIOLOGICAL  S. SITE LABORATORY(HQ):  SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI MALAYA,, MALAYSIA
BIOLOGICAL  S. SITE LABORATORY(HQ):  SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI MALAYA,,

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	(UMPEDAC), LEVEL G, WISMA R&D, UNIVERSITI MALAYA JALAN PANTAI BAHARU, MALAYSIA
FIELD(S) OF TESTING:	ELECTRICAL
8 . SITE LABORATORY(HQ):	CATEGORY I
FIELD(S) OF TESTING:	ELECTRICAL
9. SITE LABORATORY(HQ):	OPTICAL CALIBRATION FACILITY PHOTONICS RESEARCH CENTRE (PRC), BLOCK A, DEPT. OF PHYSICS FACULTY OF SCIENCE UNIVERSITI MALAY, MALAYSIA
FIELD(S) OF CALIBRATION:	OPTICAL & PHOTOMETRIC

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).

CENTRAL LOCATION:	CENTRE FOR RESEARCH SERVICES Level 2, Research Management & Innovation Complex University of Malaya 50603 WP Kuala Lumpur , 50603, Wilayah Persekutuan Kuala Lumpur
FIELD(S) OF TESTING:	NUCLEIC ACID,

**SCOPE OF TESTING: NUCLEIC ACID** 

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Blood (serum/plasma) Or Cell Culture Materials, Materials, Synthetic Rna	Detection of dengue virus	In-house method UM/SL/TM-1 based on dengue virus detection and serotyping using DengueDetect® primers Multiplex RT-PCR
		In-house method UM/SL/TM-4 based on dengue virus detection using RealTime RT-PCR.
Oral And Respiratory Specimens Eg. Nasopharyngeal Swab (nps), Oropharyngeal Swab (ops), Nasal Swab (ns), Sputum, Deep Throat Saliva Orcell Culture Materials	Detection of SARS-Coronavirus-2	UM/SL/TM-5 based on SARS- CoV-2 detection using Real-Time RT-PCR

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	LEVEL 3, RESEARCH MANAGEMENT & INNOVATION COMPLEX UNIVERSITI MALAYA, MALAYSIA
	DIVISION INSTITUTE OF RESEARCH MANAGEMENT & SERVICES,
SITE LOCATION (HQ)	1. INFRA ANALYSIS LABORATORY RESEARCH SERVICES

## **SCOPE OF TESTING: MECHANICAL**

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Physical	- Surface Area (BET)/ Mesopore	ASTM D3663-20
Catalysts And Catalyst Carriers	(2nm-50nm)	

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SITE LOCATION (HQ)	2. ALGAE RESEARCH LABORATORY INSTITUTE OF OCEAN AND
	EARTH SCIENCES (IOES),
	B207, BLOCK B, LEVEL 2, ADVANCE STUDIES COMPLEX
	UNIVERSITI MALAYA,
	MALAYSIA
FIELD(S) OF TESTING:	BIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Microalgae Culture Originating From Various Sources Including Fresh Water, Marine Water, Sediment, Soil, Epiphytic On Substrates, Sludge	Microalgae taxonomic identification	UM/ARL/TM-1 based on i) APHA (2017) Part 10900 Identification of Aquatic Organisms: C. Key for Identification of Freshwater Algae Common in Water Supplies and Polluted Waters.
		ii) AlgaeBase Website (http://www.algaebase.org)

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	(TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI MALAYA,, MALAYSIA
SITE LOCATION (HQ)	3. ANTIVIRAL RESEARCH LABORATORY (AVL) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC),

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Chemical Disinfectants And	Virus inactivation assay (Log10	UM/AVL/TM-1 based on BS EN
Antiseptics	reduction)	14476:2013+A2:2019

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SITE LOCATION (HQ)	4. VACCINE RESEARCH LABORATORY (VRL) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC), LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI MALAYA,, MALAYSIA
FIELD(S) OF TESTING:	BIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Chemical Disinfectants/ Antiseptics	Antimicrobial assay/ Percent	UM/VRL/TM-1 based on ASTM
And Antimicrobial Equipment	reduction (%)	E2315- 16

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SITE LOCATION (HQ)	5. SURVEILLANCE LABORATORY (SL 1) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC),
	LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
	MALAYA,,
	MALAYSIA
FIELD(S) OF TESTING:	BIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Blood (serum/plasma)	Detection of dengue antibodies and antigen	UM/SL/TM-2 based on Dengue NS1, IgM and IgG ELISA
		UM/SL/TM-3 based on Dengue NS1Ag and IgM+IgG Ab fluorescence immunoassay (FIA) Rapid Test

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SITE LOCATION (HQ)	6. SURVEILLANCE LABORATORY (SL 2) TROPICAL INFECTIOUS DISEASES RESEARCH & EDUCATION CENTRE (TIDREC),
	LEVEL 2, HIGH IMPACT RESEARCH (HIR) BUILDING, UNIVERSITI
	MALAYA,,
	MALAYSIA
FIELD(S) OF TESTING:	BIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Blood (serum/plasma)	Detection of dengue antibodies and antigen	UM/SL/TM-2 based on Dengue NS1, IgM and IgG ELISA
		UM/SL/TM-3 based on Dengue NS1Ag and IgM+IgG Ab fluorescence immunoassay (FIA) Rapid Test

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SITE LOCATION (HQ)	7. PV SOLAR ENERGY INVERTER TESTING LABORATORY UM POWER ENERGY DEDICATED ADVANCED CENTRE (UMPEDAC), LEVEL G, WISMA R&D, UNIVERSITI MALAYA JALAN PANTAI BAHARU, MALAYSIA
FIELD(S) OF TESTING :	ELECTRICAL

#### **SCOPE OF TESTING: ELECTRICAL**

Material / Product Tested	Type Of Test / Properties Measured / Range Of	Standard Test Methods / Equipment / Techniques
	Measurement	
Photovoltaic Inverter	1) Power factor	IEC 61727:2004
100 W To 10 Kw	2) Current harmonics	
	3) Direct current injection	
	4) Under and over voltage	
	5) Under and over frequency	
	6) Response to utility recovery	
	Voltage flicker	IEC 61000-3-3:2013
	Anti-islanding	IEC 62116:2014

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SITE LOCATION (HQ)	8. CATEGORY I
FIELD(S) OF TESTING:	ELECTRICAL

#### **SCOPE OF TESTING: ELECTRICAL**

Material / Product Tested	Type Of Test / Properties Measured / Range Of	Standard Test Methods / Equipment / Techniques
	Measurement	The second second
Photovoltaic Inverter	1) Power factor	IEC 61727:2004 Distribution
10 Kw To 10 Mw	2) Current harmonics	Code for Peninsular Malaysia,
	3) Direct current injection	Sabah, and F.T Labuan
	4) Voltage fluctuation	(Amendments) 2017
	5) Anti-islanding	
	Voltage flicker	IEC 61000-3-11:2017 Distribution
		Code for Peninsular Malaysia,
		Sabah, and F.T Labuan
		(Amendments) 2017

SITE LOCATION (HQ)	1. OPTICAL CALIBRATION FACILITY PHOTONICS RESEARCH CENTRE (PRC) BLOCK A, DEPT. OF PHYSICS FACULTY OF SCIENCE UNIVERSITI MALAY, MALAYSIA
FIELD(S) OF CALIBRATION:	OPTICAL & PHOTOMETRIC

#### **SCOPE OF CALIBRATION: OPTICAL & PHOTOMETRIC**

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques	Remarks
Optical Time Domain Reflectometers (otdrs) (single Mode Fibre) Length Scale	5 km	0.23 m	Measured by comparison to single mode fibre physical standard. Wavelength: 1310 nm and 1550 nm UM/OCF/TM-1: Calibration Method for Calibration of Optical-Time Domain Reflectometer (OTDR) based on IEC 61746 -1:2009

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques	Remarks
	10 km	0.38 m	Measured by comparison to single mode fibre physical standard. Wavelength: 1310 nm and 1550 nm UM/OCF/TM-1: Calibration Method for Calibration of Optical-Time Domain Reflectometer (OTDR) based on IEC 61746 -1:2009