



**STANDARDS**  
MALAYSIA

# Certificate of Accreditation

No: SAMM 582

Accredited since: 5 February 2013

This is to certify that

INSTITUTE OF BIOSCIENCE  
UNIVERSITI PUTRA MALAYSIA  
UPM SERDANG, SELANGOR  
MALAYSIA



Scan this QR Code or visit  
[www.jsm.gov.my/cab-directories](http://www.jsm.gov.my/cab-directories)  
for the current scope of accreditation

has been granted accreditation in respect of the scope of accreditation described in the schedule, subject to the terms and conditions governing the *Skim Akreditasi Makmal Malaysia (SAMM)*, the Laboratory Accreditation Scheme of Malaysia.

Laboratories accredited under SAMM meet the requirements of MS ISO/IEC 17025. This Malaysian Standard is identical with ISO/IEC 17025 published by the International Organization for Standardization (ISO).



(DATUK FADILAH BAHARIN)  
Director General  
Department of Standards Malaysia

Date of issue: 22 January 2019

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LABORATORY LOCATION:  
(PERMANENT LABORATORY)
**INSTITUTE OF BIOSCIENCE  
UNIVERSITI PUTRA MALAYSIA  
43400 UPM SERDANG  
SELANGOR  
MALAYSIA**

FIELDS OF TESTING:

**BIOLOGICAL AND CHEMICAL**

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).

**SCOPE OF TESTING: BIOLOGICAL  
(MICROSCOPY UNIT)**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Animal Tissue	Morphological Study	In-house method, UPM/IBS/TM1 Morphological Study of Animal Tissue using SEM
	Ultrastructural Study	In-house method, UPM/IBS/TM2 Ultrastructural Study of Animal Tissue
Plant Tissue	Morphological Study	In-house method, UPM/IBS/TM3 Morphological Study of Plant Tissue using SEM
	Ultrastructural Study	In-house method, UPM/IBS/TM4 Ultrastructural Study of Plant Tissue
Cell Suspension	Morphological Study	In-house method, UPM/IBS/TM5 Morphological Study of Cell Suspension using SEM
	Ultrastructural Study	In-house method, UPM/IBS/TM6 Ultrastructural Study of Cell Suspension

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**SCOPE OF TESTING: BIOLOGICAL  
(MICROSCOPY UNIT)**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Fungi	Morphological Study  Ultrastructural Study	In-house method, UPM/IBS/TM7 Morphological Study of Fungi using SEM  In-house method, UPM/IBS/TM8 Ultrastructural Study of Fungi

Notes:

SEM : Scanning Electron Microscope

**Signatories:**

1. Prof. Dato' Dr. Tengku Azmi Tengku Ibrahim
2. Assoc. Prof. Dr. Intan Shameha Abdul Razak

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**SCOPE OF TESTING: CHEMICAL**  
**- DPPH- LAB. OF MOLECULAR BIOMEDICINE**  
**(NUTRI-COSMECEUTICALS & NUTRIGENOMIC PROGRAMME)**  
**- ELEMENTAL ANALYSIS – EDX**  
**(MICROSCOPY UNIT)**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<b>Agriculture Product and Material &amp; Foods</b>  Vegetable, herbs, fruits, spices and derived products, plant material (methanol soluble)	DPPH. (2, 2 diphenyl-1picryl hydrazyl free radical) scavenging activity (expressed as TEAC)	In-house method, UPM/IBS/TM9
<b>All type of Materials / Products</b>  Solid, powder and liquid	Elemental analysis (qualitative)	In-house method, UPM/IBS/TM10

Notes:

TEAC : Trolox Equivalent Antioxidant Capacity

**Signatories:**

- |    |   |                         |
|----|---|-------------------------|
| 1. | Assoc. Prof. ChM Dr. Intan Safinar bt. Ismail | IKM No.: M/3087/5830/10 |
| 2. | ChM Muhammad Farhan bin Nazarudin             | IKM No.: M/5524/8970/21 |