

NO: SMM 1084

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LABORATORY LOCATION:  
(PERMANENT LABORATORY)

APICAL SCIENTIFIC SDN. BHD.  
NO. 7-1, 7-2 AND 9-1, JALAN SP 2/7  
TAMAN SERDANG PERDANA, SEKSYEN 2  
43300 SERI KEMBANGAN  
MALAYSIA

FIELD(S) OF TESTING: NUCLEIC ACID

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: NUCLEIC ACID

| Materials/<br>Products Tested   | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques  |
|---|---|---|
| DNA Sample provided by the customers  | DNA Sequencing  | In-house method ASL-SOP-SEQ-01 to ASL-SOP-SEQ-09 based on Sanger DNA Sequencing by using Capillary Electrophoresis.   |
|   | Microsatellite Analysis                                       | In-house method ASL-SOP-FAS-01 to ASL-SOP-FAS-05 based on DNA Fragment Analysis by using Capillary Electrophoresis.   |
| Human Cell Line provided by the customers in the form of: <ul style="list-style-type: none"> <li>- Genomic DNA</li> <li>- Cell Culture</li> </ul> | Human Cell Line Authentication                                | <p>In-house method ASL-SOP-CLA-DNA based on STR-based method.</p> <p>In-house method ASL-SOP-CLA-Cell Pellet based on GeneAII® Exgene™ DNA Purification Handbook and STR-based method.</p> <p>In-house method ASL-SOP-CLA-FTA based on Macherey-Nagel™ NucleoSpin™ Tissue User Manual and STR-based method.</p> |

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| Materials/<br>Products Tested   | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques   |
|---|---|--|
| Genomic DNA provided by the customers   | Amplicon Metagenomic Next-Generation Sequencing               | In-house method ASL-SOP-NGS-01 to ASL-SOP-NGS-13 based on Illumina 16S Metagenomic Sequencing Library Preparation.   |
| Bacterial Sample provided by the customers in the form of: <ul style="list-style-type: none"> <li>- Genomic DNA</li> <li>- Microbial Culture</li> </ul> | DNA Barcoding of Bacteria                                     | In-house method ASL-SOP-DBC-Bacterial based on "Current protocols in molecular biology" refer Supplement 42, "Preparation of Genomic DNA from Mammalian Tissue" PubMed: 2001-v133n1, Dec. 2020; ISSN: 1934-3639; and Geneaid Presto™ Mini gDNA Bacteria Kit. |
| Fungal Sample provided by the customers in the form of: <ul style="list-style-type: none"> <li>- Genomic DNA</li> <li>- Microbial Culture</li> </ul>    | DNA Barcoding of Fungus                                       | In-house method ASL-SOP-DBC-Fungal based on "Current protocols in molecular biology" refer Supplement 42, "Preparation of Genomic DNA from Mammalian Tissue" PubMed: 2001-v133n1, Dec. 2020; ISSN: 1934-3639; and Geneaid Presto™ Mini gDNA Yeast Kit.       |

**Signatories:**

1. Tan Ting Ting
2. Low Yee Ping
3. Tan Jo Ling
4. Lim Soon Hong
5. Muhammad Hafizh Bin Shafie Patt