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|                                                                                   |                                                                                                                                               |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LABORATORY LOCATION/<br/>CENTRAL OFFICE:</b>                                   | <b>KHTP BIO ANALYTICAL LABORATORY SDN. BHD.<br/>GROUND FLOOR, TECHNO CENTRE<br/>KULIM HI-TECH PARK<br/>09000 KULIM<br/>KEDAH<br/>MALAYSIA</b> |
|  |                                                                                                                                               |
| <b>ACCREDITED SINCE:</b>                                                          | <b>24 MAY 2010</b>                                                                                                                            |
| <b>FIELD(S) OF TESTING:</b>                                                       | <b>CHEMICAL, MICROBIOLOGY</b>                                                                                                                 |
| <b>SITE:</b>                                                                      |                                                                                                                                               |
| <b>1. SITE LABORATORY:</b>                                                        | <b>SITE 1</b>                                                                                                                                 |
| <b>FIELD(S) OF TESTING:</b>                                                       | <b>CHEMICAL</b>                                                                                                                               |

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).

|                             |                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CENTRAL LOCATION:</b>    | <b>KHTP BIO ANALYTICAL LABORATORY SDN. BHD.<br/>GROUND FLOOR, TECHNO CENTRE<br/>KULIM HI-TECH PARK<br/>09000 KULIM, KEDAH<br/>MALAYSIA</b> |
| <b>FIELD(S) OF TESTING:</b> | <b>CHEMICAL, MICROBIOLOGICAL</b>                                                                                                           |

**SCOPE OF TESTING: CHEMICAL**

| <b>Materials/<br/>Products Tested</b>                             | <b>Type of Test/<br/>Properties Measured/<br/>Range of Measurement</b> | <b>Standard Test Methods/<br/>Equipment/Techniques</b>                              |
|-------------------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Agricultural Products and<br/>Materials</b><br><br>Animal Feed | Moisture                                                               | In-House Method LTM 7.2.1A-009<br>based on AOAC Official Method<br>931.04, 2005     |
|                                                                   | Ash                                                                    | In-House Method LTM 7.2.1A-<br>010 based on AOAC Official<br>Method<br>923.03, 2005 |
|                                                                   | Crude fat                                                              | AOAC Official Method 2003.06,<br>2005                                               |
|                                                                   | Crude protein                                                          | AOAC Official Method 2001.11,<br>2005                                               |

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**SCOPE OF TESTING: CHEMICAL**

| <b>Materials/<br/>Products Tested</b>                                                                                                                                               | <b>Type of Test/<br/>Properties Measured/<br/>Range of Measurement</b> | <b>Standard Test Methods/<br/>Equipment/Techniques</b>                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Agricultural Products and<br/>Materials</b><br><br>Animal Feed                                                                                                                   | Carbohydrates                                                          | In-House Method LTM 7.2.1A-013<br>based on Methods of Analysis for<br>Nutrition Labeling, AOAC<br>International 1993 |
|                                                                                                                                                                                     | Calories/Energy                                                        | In-House Method LTM 7.2.1A-015<br>based on Methods of Analysis for<br>Nutrition Labeling, AOAC<br>International 1993 |
| <b>Industrial Hygiene</b><br>Biological Specimen<br><br><ul style="list-style-type: none"> <li>Urine</li> </ul><br><ul style="list-style-type: none"> <li>Serum / Plasma</li> </ul> | Acetone                                                                | In-House Method LTM 7.2.1A-032<br>using HS-GC-FID                                                                    |
|                                                                                                                                                                                     | Cholinesterase                                                         | In-House Method LTM 7.2.1A-115<br>using Chemistry Analyser                                                           |

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### SCOPE OF TESTING: CHEMICAL

| Materials/<br>Products Tested                                                                                                                                                                                                                                                                                                                                         | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Industrial Hygiene</b><br><br>Biological<br>Specimens Urine                                                                                                                                                                                                                                                                                                        | S-Phenylmercapturic Acid (SPMA)                               | In-House Method LTM 7.2.1A-106<br>using LC-MS/MS                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                       | Toluene                                                       | In-House Method LTM 7.2.1A-102<br>using HS-GC-FID                                                                    |
| <b>Drugs and<br/>Pharmaceuticals</b><br><br>Herbs and Herbal<br>Products Tablets<br>Capsules<br>Liquid<br>Cream Balm<br>Raw materials                                                                                                                                                                                                                                 | Cadmium, Lead, Arsenic                                        | In-house Method LTM 7.2.1A-017<br>using Microwave digestion /<br>GFAAS                                               |
| <b>Foods</b><br><br>Dairy products<br><br>Fish and fish products<br><br>Flour and confectionary<br><br>Honey and honey products<br><br>Infant food<br><br>Meat, poultry and derived<br>Products<br><br>Non-alcoholic beverages<br><br>Nuts, fruits, vegetables<br>and derived products<br><br>Sauces, herbs, spices and<br>condiments<br><br>Sugar and sugar products | Moisture                                                      | In-House Method LTM 7.2.1A-009<br>based on AOAC Official Method<br>931.04, 2005                                      |
|                                                                                                                                                                                                                                                                                                                                                                       | Ash                                                           | In-House Method LTM 7.2.1A-010<br>based on AOAC Official Method<br>923.03, 2005                                      |
|                                                                                                                                                                                                                                                                                                                                                                       | Crude fat                                                     | In-House Method LTM 7.2.1A-012<br>based on AOAC Official Method<br>2003.06, 2005                                     |
|                                                                                                                                                                                                                                                                                                                                                                       | Crude protein                                                 | In-House Method LTM 7.2.1A-011<br>based on AOAC Official Method<br>2001.11, 2005                                     |
|                                                                                                                                                                                                                                                                                                                                                                       | Carbohydrates                                                 | In-House Method LTM 7.2.1A-013<br>based on Methods of Analysis for<br>Nutrition Labeling, AOAC<br>International 1993 |
|                                                                                                                                                                                                                                                                                                                                                                       | Calories/Energy                                               | In-House Method LTM 7.2.1A-015<br>based on Methods of Analysis for<br>Nutrition Labeling, AOAC<br>International 1993 |
|                                                                                                                                                                                                                                                                                                                                                                       |                                                               |                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                       |                                                               |                                                                                                                      |
| <b>Foods</b><br><br>Beverages And Fruit Juices                                                                                                                                                                                                                                                                                                                        | Alcohol                                                       | In-House Method LTM 7.2.1A-022<br>using GC-FID                                                                       |
| <b>Foods</b><br><br>Beverages and Fruit Products                                                                                                                                                                                                                                                                                                                      | Benzoic Acid Sorbic Acid                                      | In-House Method LTM 7.2.1A-031<br>using HPLC                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                       | Sugar                                                         | ASEAN Manual of Food<br>Analysis, 2011                                                                               |

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| <b>Materials/<br/>Products Tested</b>                                                                                                                                                                                                             | <b>Type of Test/<br/>Properties Measured/<br/>Range of Measurement</b>                                                        | <b>Standard Test Methods/<br/>Equipment/Techniques</b>    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Foods</b><br><br>Dairy products<br><br>Fish and fish products<br><br>Honey and honey products<br><br>Infant food<br><br>Meat, poultry and derived Products<br><br>Non-alcoholic beverages<br><br>Nuts, fruits, vegetables and derived products | Total Fat                                                                                                                     | In-House Method LTM 7.2.1A-096 based on AOAC 963.15, 2005 |
| <b>Industrial Hygiene</b><br><br>Biological Specimen<br><br>Urine<br><br>Blood                                                                                                                                                                    | Aluminium<br>Arsenic<br>Antimony<br>Cadmium<br>Chromium<br>Cobalt<br>Copper<br>Lead<br>Manganese<br>Mercury<br>Nickel<br>Zinc | In-House Method LTM 7.2.1A-040 using ICP-MS               |
| <b>Industrial Hygiene</b><br><br>Blood                                                                                                                                                                                                            | Lead (Pb)                                                                                                                     | In-House Method LTM 7.2.1A-024 using GF-AAS               |
| <b>Industrial Hygiene</b><br><br>Urine                                                                                                                                                                                                            | 2, 5 Hexanedione                                                                                                              | In-House Method LTM 7.2.1A-020 using GC-FID               |
|                                                                                                                                                                                                                                                   | Hippuric Acid                                                                                                                 | In-House Method LTM 7.2.1A-021 using HPLC-PDA             |
|                                                                                                                                                                                                                                                   | Creatinine                                                                                                                    | In-House Method LTM 7.2.1A-028 using UV-VIS               |
|                                                                                                                                                                                                                                                   | Phenol                                                                                                                        | In-House Method LTM 7.2.1A-056 using HPLC-PDA             |
|                                                                                                                                                                                                                                                   | Methyl Hippuric Acid                                                                                                          | In-House Method LTM 7.2.1A-078 using HPLC-PDA             |

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### SCOPE OF TESTING: CHEMICAL

| Materials/<br>Products Tested                                        | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques                                  |
|----------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Water</b>                                                         | pH                                                            | APHA 4500-H <sup>+</sup> B                                                      |
| Mineral Water                                                        | Conductivity                                                  | APHA 2510 B                                                                     |
| Potable Water                                                        | Total Suspended Solids                                        | APHA 2540 D                                                                     |
| Surface Water                                                        | Chemical Oxygen Demand                                        | APHA 5220 C                                                                     |
| Industrial Effluent                                                  | Biological Oxygen Demand                                      | APHA 5210 B & APHA 4500 -O <sub>2</sub> G                                       |
|                                                                      | Ammoniacal Nitrogen                                           | APHA 4500-NH <sub>3</sub> B, C                                                  |
| <b>Water</b><br>Surface Water<br>Industrial Effluent                 | Oil and Grease                                                | APHA 5520B                                                                      |
| <b>Water</b><br>Industrial Effluent<br>Surface Water<br>Ground Water | Cd, As, Pb, Cu, Mn, Ni, Sn, Zn, B,<br>Fe, Ag, Al, Se, Ba, Cr  | APHA 3120 B                                                                     |
| <b>Water</b><br>Industrial Effluent                                  | Fluoride                                                      | APHA 4500-F C<br>APHA 4500-F D                                                  |
|                                                                      | Colour (ADMI)                                                 | APHA 2120 F                                                                     |
|                                                                      | Hexavalent Chromium, Cr <sup>6+</sup>                         | APHA 3500-Cr B                                                                  |
|                                                                      | Sulphide                                                      | APHA 4500-S <sup>2-</sup> C & F                                                 |
|                                                                      | Phenol                                                        | APHA 5530 B & D                                                                 |
|                                                                      | Cyanide                                                       | APHA 4500-CN C & Method 8027<br>Hach Pyridine-Pyrazalone                        |
|                                                                      | Mercury                                                       | APHA 3112 B                                                                     |
|                                                                      | Formaldehyde                                                  | Method 8110 Hach MBTH<br>In-House Method LTM 7.2.1A-109<br>based on APHA 6252 B |
|                                                                      | Trivalent Chromium, Cr <sup>3+</sup>                          | In-House Method LTM 7.2.1A-108<br>based on APHA 3120 B & APHA<br>3500-Cr B      |

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| Materials/<br>Products Tested | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques                                                                                           |
|-------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Medical Devices</b>        | Ethylene Oxide Sterilization Residues                         | In-House Method LTM 7.2.1A-059A based on ISO 10993-7, 2008 and AMD 1 2019-12: Applicability of allowable limits for neonates and infants |
|                               | Ethylene Chlorohydrin Sterilization Residues                  | In-House Method LTM 7.2.1A-060A based on ISO 10993-7, 2008 and AMD 1 2019-12: Applicability of allowable limits for neonates and infants |
|                               | Ethylene Oxide and Ethylene Chlorohydrin Residues             | In-House Method LTM 7.2.1A-077 based on ISO 10993-7, 2008 and AMD 1 2019-12                                                              |

**Note:**AOAC – Association of Official Analytical Chemist, 18<sup>th</sup> Edition, 2005APHA – American Public Health Association, 21<sup>st</sup> Edition, 2005

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| <b>Materials/<br/>Products Tested</b>                                                                                                           | <b>Type of Test/<br/>Properties Measured/<br/>Range of Measurement</b>        | <b>Standard Test Methods/<br/>Equipment/Techniques</b>                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Medical Devices</b>                                                                                                                          | Sterility                                                                     | USP 41 Microbiological Test <71> Sterility Test                                                                                                                                                  |
| Medical Devices                                                                                                                                 | Bioburden                                                                     | ISO 11737-1, 2018                                                                                                                                                                                |
| Medical Solutions<br>- Parenteral Preparation<br>- Ophthalmic<br>- Non- Injectable preparation                                                  | Bacteriostasis and Fungistasis                                                | A) In-house method based on USP 41 Microbiological Test <71> Sterility Test<br><br>B) ISO 11737-2, 2019                                                                                          |
| <b>Medical Devices</b>                                                                                                                          | Sterility                                                                     | In-House Method LTM 7.2.1A-062 on USP 41 Microbiological Test <71> Sterility Test                                                                                                                |
| Biological Indicator                                                                                                                            | Population Count                                                              | In-House Method LTM 7.2.1A-063A based on USP 41 Microbiological Test <55> and ISO 11138 :2017 Part 1 and Part 2<br><br>In-House Method LTM 7.2.1A-063B based on 3M Technical Bulletin-05- 000003 |
| Spore Strip                                                                                                                                     |                                                                               |                                                                                                                                                                                                  |
| <b>Medical Devices</b><br>Medical Devices<br><br>Medical Solutions<br>- Parenteral Preparation<br>- Ophthalmic<br>- Non- Injectable Preparation | Sterility                                                                     | ISO 11737 Part 2                                                                                                                                                                                 |
| <b>Microbiological tests on<br/>pharmaceutical and cosmetics</b>                                                                                | Total Aerobic Microbial Count                                                 | British Pharmacopoeia 2014 Appendix XVI B<br><br>Pour Plate Technique                                                                                                                            |
| Traditional Herbal Products<br><br>Cosmetic<br><br>Toiletries                                                                                   | Total Yeast & Mould Count                                                     |                                                                                                                                                                                                  |
|                                                                                                                                                 | Bile Tolerant Gram Negative Bacteria<br>- Present/Absent<br>Semi Quantitative |                                                                                                                                                                                                  |
|                                                                                                                                                 | <i>Escherichia coli</i><br>- Present/Absent<br>Semi Quantitative              |                                                                                                                                                                                                  |
|                                                                                                                                                 | <i>Salmonella</i>                                                             |                                                                                                                                                                                                  |
|                                                                                                                                                 | <i>Pseudomonas aeruginosa</i>                                                 |                                                                                                                                                                                                  |
|                                                                                                                                                 | <i>Staphylococcus aureus</i>                                                  |                                                                                                                                                                                                  |

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### SCOPE OF TESTING: MICROBIOLOGY

| Materials/<br>Products Tested                                                                                                                                                                                               | Type of Test/<br>Properties Measured/<br>Range of Measurement | Standard Test Methods/<br>Equipment/Techniques                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Medical Devices</b><br><br>Medical Solutions<br><br>- Medical Injection Liquid<br><br>- Dialysis Solution<br><br>- Water for Injection (WFI)<br><br><br><br>Water<br><br>- Reverse Osmosis Water<br><br>- Purified Water | Bacterial Endotoxins Test by Gel<br>Clot Method               | USP 41 Biological Test and Assay<br><85> Bacterial Endotoxins Test |
| Medical Devices                                                                                                                                                                                                             | Bacterial Endotoxins test by<br>kinetic turbidimetric method  | USP <85> Bacterial Endotoxin test<br>ISO 11737, 2023               |



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|                             |          |
|-----------------------------|----------|
| <b>SITE LOCATION (HQ)</b>   | SITE 1   |
| <b>FIELD(S) OF TESTING:</b> | CHEMICAL |

**SCOPE OF TESTING: CHEMICAL**

| <b>Materials/<br/>Products Tested</b> | <b>Type of Test/<br/>Properties Measured/<br/>Range of Measurement</b> | <b>Standard Test Methods/<br/>Equipment/Techniques</b> |
|---------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Water</b>                          | pH and Temperature (in-situ)                                           | APHA 2550 B                                            |
| Industrial Effluent                   | Free Chlorine (in-situ)                                                | APHA 4500-Cl G                                         |