

NO: SAMM 724

Page: 1 of 11

LABORATORY LOCATION:
(PERMANENT LABORATORY)
BIO SYNERGY LABORATORIES SDN. BHD.
NO. 43, JALAN SS 22/23
DAMANSARA JAYA
47400 PETALING JAYA, SELANGOR
MALAYSIA

FIELDS OF TESTING:

CHEMICAL & MICROBIOLOGY

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: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food Products: <ul style="list-style-type: none"> • Non-alcoholic beverages • Fruits & Vegetables & Derived Products • Sauces, Herbs, Spices & Condiments • Flour and Confectionery • Fish products 	Benzoic Acid Sorbic Acid	In-house method CCF-01, Rev B, based on Journal Chromatography A, 1073 (2005) 393-397
Food Products: <ul style="list-style-type: none"> • Juice • Jelly Products • Herbs spices • Coffee • Tea • Frozen Food • Seafood • Flour & Confectionaries • Food Additives Supplement • Feed product • Edible Fats, Oil & their products • Cocoa and Cocoa Products 	Metals/Minerals <ul style="list-style-type: none"> • Lead • Cadmium • Tin • Calcium • Magnesium • Iron • Zinc • Copper • Sodium • Potassium • Antimony • Chromium • Nickel 	In-house method CCF-03, based on AOAC 999.11 and APHA 3120
	Mercury	In-house method CCF-04, based on AOAC 971.21 and APHA 3120
	Arsenic	In-house method CCF-05, based on AOAC 986.15 and APHA 3120

NO: SAMM 724

Page: 2 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food Products: <ul style="list-style-type: none"> Coffee & Coffee products 	Caffeine content Coffee content	MS 1360:1994 (Appendices A and G)
Cosmetics & Essential oils: <ul style="list-style-type: none"> Cosmetics and Toileteries Pharmaceutical Products/Traditional Medicine: <ul style="list-style-type: none"> Powder Capsule (Hard/Soft) Oil & Cream Pill 	Metals/Minerals <ul style="list-style-type: none"> Lead Cadmium Copper Mercury Arsenic	In house method CCP-01, based on BP 2013, Vol. IV, Appendix VII and APHA 3120
Food Products: <ul style="list-style-type: none"> Juice Sauces, Herbs, Spices & Condiments Non Alcoholic Beverages Flour and Confectionery Meat, Poultry & Derived Products Cocoa and Cocoa Products Frozen Food 	Moisture Protein / Nitrogen Ash Crude Fiber Crude Fat Total Fat Total Carbohydrate Energy Content as Calories Total Sugar (As inverted Sugar)	In-house method CCF-07, based on MS ISO 6496 : 2003 In-house method CCF-06, based on AOAC 2001.11, ISO 1871 : 2009 In-house method CCF-09, based on AOAC 942.05 In-house method CCF-13, based on MS ISO 6865 : 2003 In-house method CCF-12, based on MS 1416 : 1997 In-house method CCF-08, based On Pearson's Chemical Analysis of Food, 8 th Ed, 1990 Method of analysis for nutrition labelling, Chapter 1, 1993 Method of analysis for nutrition labelling, Chapter 1, 1993 In-house method CCF-21 based on AOAC 968.28

NO: SAMM 724

Page: 3 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Feed	Moisture	MS ISO 6496 : 2003
	Protein / Nitrogen	AOAC 2001.11, ISO 1871 : 2009
	Ash	AOAC 942.05
	Crude Fiber	MS ISO 6865 : 2003
	Crude Fat	MS 1416 : 1997
	Total Fat	In-House Method CCF-08, based On Pearson's Chemical Analysis of Food, 8 th Ed, 1990
	Total Carbohydrate	In-House Method CCF-10, based on Method of analysis for nutrition labelling, Chapter 1, 1993
	Energy Content as Calories	In-House Method CCF-11, based on Method of analysis for nutrition labelling, Chapter 1, 1993
	Total Volatile Basic Nitrogen (TVBN)	In-House Method CCF-22 based on Journal of J.Life Sci.Biomed. 2(5): 187-191, 2012
Edible Oil (Palm Oil and its Products)	Determination of Moisture and Volatile Matter	MPOB p2.1 Part 1
	Determination of Impurities	MPOB p2.2
	Determination of Peroxide Value	MPOB p2.3
	Determination of Acidity	MPOB p2.5
	Determination of DOBI	MPOB p2.9
	Determination of Iodine Value	MPOB p3.2
	Determination of Total Fatty Matter (TFM)	MPOB p3.7
	Determination of Lovibond Colour	MPOB p4.1
	Determination of Slip Melting Point	MPOB p4.2
	Determination of Cloud Point	MPOB p4.3

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 4 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Effluent	Temperature pH Chemical Oxygen Demand Biological Oxygen Demand Total Suspended Solid Oil and Grease	APHA 2550 B APHA 4500 +H APHA 5220 C APHA 5210 B, APHA 4500 OG APHA 2540 D APHA 5520 B
Water Industrial Effluent	Ammonical Nitrogen Color ADMI Sulphide Chromium Hexavalent Chromium Trivalent Phenol Free Chlorine Formaldehyde Fluoride Cyanide	APHA 4500-NH ₃ B&C APHA 2120 F APHA 4500-S ²⁻ F APHA 3500-Cr B In-house method CCW-16 based on APHA 3500-Cr B & 3120 B APHA 5530 D APHA 4500-Cl G In-house method CCW-11 based on Hach Method 8110 APHA 4500-F D In-house method CCW-15 based on APHA 4500- CN C and HACH Method 8027

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 5 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water <ul style="list-style-type: none"> • Potable and Domestic water • Industrial water • Distilled Demineralized water • Reverse Osmosis water • Ultrapure water • Swimming Pool water • Cooling Tower water • Boiler water • Surface water • Mineral water • Industrial effluent 	Lead Cadmium Tin Calcium Magnesium Iron Zinc Copper Sodium Potassium Antimony Chromium Aluminium Arsenic Barium Beryllium Boron Cobalt Lithium Manganese Molybdenum Nickel Selenium Silicon Silver	APHA 3120 B
	Mercury	In-house method CCW-19 based on APHA 3112 B by MPAES
	Sample Pre-treatment for metals analysis	APHA 3030 F
Pharmaceutical products / Traditional products / Food Supplement	Sodium Hyaluronate	European Pharmacopoeia 5.0 (2005)
	Lovastatin	QB/T 2847-2007
	L-Glutathione	In-house method CCP-03 based on USP41 using HPLC
	Astaxanthin	In-house method CCP-05 based on USP40- NF 35 2017 using UV-VIS Spectrophotometer

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 6 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Edible Oil and Fats	2-MCPD, 3MCPD Fatty Acid Esters and Glycidol Esters	AOCS Cd 29a-13 (revised 2017)
	<u>Trace Elements</u> Calcium Copper Iron Magnesium Nickel Silicon Lead Cadmium Sodium Phosphorus	In-House Method CCF-29 based on AOCS Ca 17-01 (7 th edition, 2017) In House Method CCF-30 based on AOCS Ca 20-99 (7 th edition, 2017)
Pharmaceutical <ul style="list-style-type: none"> • Powder • Tablet • Hard Gel Capsule • Soft Gel Capsule 	Cadmium Lead Arsenic Mercury	In-House Method CCP-10 based on BP 2019, Vol V
Food Products <ul style="list-style-type: none"> • Milk and milk products • Edible oil, fats and derived products • Egg & egg products • Frozen products (processed food) • Cereal, Flour & Confectionery • Food supplements • Meat, poultry & derived products • Nuts, fruit, vegetables & derived product • Non-alcoholic beverage • Juices • Cocoa & Cocoa products • Sauces, Herbs, Spices & Condiments 	Vitamin D	AOAC Method 2002.05 (21 st edition, 2019)
	Cholesterol	In-House Method CCF-24 based on GB 5009.128-2016
	Sugar (Fructose, Glucose, Sucrose, Maltose, Lactose)	In-House Method CCF-23 based on GB 5009.8-2016
	Total Dietary Fibre	AOAC Method 985.29 with Megazyme Total Dietary Fiber Assay Procedure (21 st edition, 2019)
	Fatty Acid Composition Saturated Fat Monounsaturated Fat Polyunsaturated Fat Trans Fat	In-House Method CCF-26 based on AOAC 996.06 and MPOB p3.5 (AOAC 21 st edition, 2019, MPOB 2005)
Meat and Bird Nest	Nitrite and Nitrate	GB 5009.33-2010

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 7 of 11

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water <ul style="list-style-type: none"> • Potable and Domestic water • Industrial water • Distilled Demineralized water • Reverse Osmosis water • Ultrapure water • Swimming Pool water • Cooling Tower water • Boiler water • Surface water • Mineral water • Treated water • River water 	<u>Anions</u> Fluoride, Chloride, Nitrate, Bromide, Nitrite, Sulphate, Phosphate	APHA 4110 B (22 nd edition, 2012)

APHA 22nd edition, 2012**Signatories**

- | | | |
|----|------------------------------------|--|
| 1. | Khoo Hwa Chuan | IKM No. M/2212/4433/03/05 (Non-Resident) |
| 2. | Wong Yoong Mei | IKM No. M/2673/5381/08 |
| 3. | Noor Amira Bt Mat Noor | IKM No. M/3948/6701/13 |
| 4. | Ching Wai Loung | IKM No. M/1257/4064/00/01 |
| 5. | Goh Sing Yae | IKM No. L/2660/7896/17 |
| 6. | Khairun Nasriah Bt Azmi | IKM No. L/2643/7842/17
(for chemical testing in water/ effluents) |
| 7. | Umi Kalthom Bt Baharuddin | MJMM 0545 (Chemical – Food) |
| 8. | Mohd Helmi Bin Mohd Redzuan | IKM No. M/2981/5791/10
(for chemical testing in water/ effluents) |
| 9. | Norhanisah Binti Jamaludin | IKM No. L/2645/7846/17
(for chemical testing except water/ effluents) |

NO: SAMP 724

Page: 8 of 11

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food and Feed Products: <ul style="list-style-type: none"> • Coffee • Tea • Cereal Food • Frozen Food • Seafood • Sauces • Fruit Drink & Juice • Flour & Confectionery • Dairy Products • Edible oils, fats and their products • Egg and egg products • Fruits and vegetables • Nuts and nut products • Ready to eat savouries • Meat and poultry products • Fish and fish products • Herbs and spices • Animal feed 	Aerobic Plate Counts Yeast and Mould Counts <i>E. coli</i> / Coliform Count <i>Staphylococcus aureus</i> counts <i>Salmonella</i> detection	AOAC Official Method 990.12 (3M Petrifilm) AOAC Official Method 2014.05 (3M Petrifilm) AOAC Official Method 998.08 & 991.14 (3M Petrifilm) AOAC Official Method 2003.11, 2003.07, 2003.08 (3M Petrifilm) AOAC Official Method 2014.01 (3M Petrifilm)
Food and Feed Products <ul style="list-style-type: none"> • Meat and poultry products • Fish/crustaceans and molluscs • Fruit and vegetables • Flour, cereal and mile products • Feed products • Beverages products • Ready to eat products 	Vibrio parahaemolyticus	ISO/TS 21872-1:2007 (E)
	<i>Vibrio cholerae</i> detection	ISO/TS 21872-1:2007 (E)
	<i>Bacillus cereus</i> count	BS EN ISO 7932:2004
	<i>Clostridium perfringens</i> count	ISO 7937:2004 (E)
Food and Feed Products <ul style="list-style-type: none"> • Meat and poultry products • Fish/crustaceans and molluscs • Fruit and vegetables • Flour, cereal and mile products • Feed products • Beverages products • Ready to eat products • Edible Oils, Fats and their products 	<i>Shigella Spp.</i>	ISO 21567:2004

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 9 of 11

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Pharmaceutical products/Traditional Medicines: <ul style="list-style-type: none"> • Powder • Capsule (Hard/Soft) • Tablet • Oil & Cream • Pill 	Total Microbial Aerobic Count	BP 2013, Appendix XVI B
	Total Combines Yeast & Mould Count	BP 2013, Appendix XVI B
	Bile-tolerant Gram Negative Bacteria i) Qualitative ii) Quantitative	BP 2013, Appendix XVI B
	<i>Escherichia coli</i> detection	BP 2013, Appendix XVI B
	<i>Salmonella</i> detection	BP 2013, Appendix XVI B
	<i>Staphylococcus aureus</i> detection	BP 2013, Appendix XVI B
	<i>Pseudomonas aeruginosa</i> detection	BP 2013, Appendix XVI B
	<i>Candida albicans</i> detection	BP 2013, Appendix XVI B
	<i>Burkholderia cepacia</i> detection	In-house method CMP-09 based on BP 2013, appendix XVI B and Himedia Manual
	Bile-tolerant Gram Negative Bacteria – Semi quantitative	BP 2013, Appendix XVI F
<i>Salmonella</i> detection	BP 2013, Appendix XVI F	
<i>Escherichia coli</i> detection and semi quantitative	BP 2013, Appendix XVI F	

Scan this QR Code or visit www.jsm.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 724

Page: 10 of 11

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental testing <ul style="list-style-type: none"> Enumeration of Microbial Count in the Air Using an Open Plate (Sedimentation method) Enumeration/Detection of Microbial count on Surface Area, Equipment and Hand Using Swab Contact Method 	<ul style="list-style-type: none"> Total Plate Count Yeast Mould Aerobic Plate Count Yeast Mould <i>Staphylococcus aureus</i> Coliform <i>E. Coli</i> Salmonella 	Compendium of Methods for the Microbiological Examination of Foods, Chapter 3, 4th Edition (2001)
Water <ul style="list-style-type: none"> Potable and Domestic water Industrial water Distilled Demineralized water Reverse Osmosis water Ultrapure water Swimming Pool water Cooling Tower water Boiler water Surface water Mineral water Industrial effluent Treated water 	Heterotropic plate count (Membrane filtration) Heterotropic plate count (Pour plate) Standard total coliform (Membrane filtration) Standard total coliform (MPN) <i>Escherichia coli</i> (Membrane filtration) <i>Escherichia coli</i> (MPN)	APHA 9215 D APHA 9215 B APHA 9222 B APHA 9221 B APHA 9222 G APHA 9221 F
Food	<i>Campylobacter jejuni</i> and <i>C. coli</i> <i>Salmonella</i> <i>Escherichia coli</i> 0157 <i>Listeria monocytogenes</i>	In-house method Detection of <i>Campylobacter jejuni</i> and <i>C. coli</i> based on ISO 10272-1:2006 using NEOGEN ANSR In-house method Detection of <i>Salmonella spp.</i> Based on BS EN ISO 6579:2002 using NEOGEN ANSR In-house method Detection of <i>E. coli</i> 0157:H7 based on BS EN ISO 16654:2001 using NEOGEN ANSR In-house method Detection of <i>Listeria monocytogenes</i> based on ISO 11290-1:1996 using NEOGEN ANSR

NO: SAMM 724

Page: 11 of 11

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Cosmetic Products	<i>Pseudomonas aeruginosa</i> detection	BP 2013, Appendix XVI B
	<i>Candida albicans</i> detection	BP 2013, Appendix XVI B
	<i>Burkholderia cepacia</i> detection	In-house method CMP-09 based on BP 2013, Appendix XVI B and Himedia Manual

Signatories:

1. **Azyan Shahirah Bt Baderol Sham** **MJMM 0275**
2. **Asha Devi Jaiyaraman** **MJMM 0676**
3. **Ahmad Afiq Bin Ahmad Johari** **MJMM 0884**