Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

LABORATORY LOCATION/ CENTRAL OFFICE:	Biochem Laboratories Sdn Bhd 101-07-03 Menara Perdana Jalan Gurdwara, Georgetown 10300 Pulau Pinang , 10300, PULAU PINANG MALAYSIA
ACCREDITED SINCE :	18 MARCH 2025
FIELD(S) OF TESTING:	CHEMICAL CHEMICAL (PALM OIL PROGRAMME) MICROBIOLOGY
SITE:	
1 . SITE LABORATORY(HQ) :	Biochem Laboratories Sdn Bhd, 101-07-03 Menara Perdana Jalan Gurdwara, Georgetown 10300 Pulau Pinang, MALAYSIA
FIELD(S) OF TESTING :	CHEMICAL,MECHANICAL,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).

CENTRAL LOCATION:	Biochem Laboratories Sdn Bhd 101-07-03 Menara Perdana Jalan Gurdwara, Georgetown 10300 Pulau Pinang , 10300, Pulau Pinang
FIELD(S) OF TESTING :	CHEMICAL, CHEMICAL, MICROBIOLOGICAL

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Environmental Monitoring - Industrial Effluents - Sewage / Sewage - Discharge	Nitrite	(BLC-68) based on HACH Spectrophotometer Method 8153
	Phosphorus	(BLC-74) based on HACH Spectrophotometer Method 8048

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Aluminium	(BLC-73) based on HACH Spectrophotometer Method 8012
	Silica	(BLC-72) based on HACH Spectrophotometer Method 8186
	Sulphate	(BLC-71) based on HACH Spectrophotometer Method 8051
	Fluoride	(BLC-70) based on HACH Spectrophotometer Method 8029
	Nitrate	(BLC-67) based on HACH Spectrophotometer Method 8039
	Nitrogen Ammonia	(BLC-66) based on HACH Spectrophotometer Method 8038
	Total Kjeldhal Nitrogen	(BLC-65) based on HACH Spectrophotometer Method 8075
	Sulphide	(BLC-63) based on HACH Spectrophotometer Method 8131
	Phenol	(BLC-62) based on HACH Spectrophotometer Method 8047
	Cyanide	(BLC-61) based on HACH Spectrophotometer Method 8027
	Chromium Hexavalent	(BLC-60) based on HACH Spectrophotometer Method 8023
	Total Chlorine	(BLC-59) based on HACH Spectrophotometer Method 8167
	Free Chlorine	(BLC-58) based on HACH Spectrophotometer Method 8021
	Boron	(BLC-57) based on HACH Spectrophotometer Method 8015
	Boron	APHA 4500-BB (2005)
	Cyanide	APHA (2005)
	Nitrate Nitrogen	APHA 4500- (2005)
	Nitrite Nitrogen	APHA (2005)
	Phenol	APHA 5530D (2005)
	Phosphorus	APHA 4500-PE (2005)
	Sulphide	APHA C&D (2005)
	Sulphate	APHA 4500-SQ (2005)
	Total Chlorine	APHA 4500-ClG (2005)
	Free/Residual Chlorine	APHA (2005)
	Colour (Spectrophotometric Method)	APHA 2120D (2005)
	Colour (Visual Comparison Method)	*APHA 2120B
	Chloride	APHA (2005)
	Total Solids	APHA 2540B (2005)
	Total Dissolved Solids	APHA 2540C (2005)
	Total Hardness	APHA 2340C (2005)
	Alkalinity	APHA 2320B (2005)
	Nitric Acid Digestion	APHA 3030E (2005)

Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Chromium Trivalent	In-house Method (BLC-78) based on APHA 3111B (2005) and APHA3500-CrB (2017) / HACH Spectrophotometer Method 8023
	Tin Arsenic Mercury	APHA 3111D (2005) APHA 3114C (2005) APHA 3112B (2005)
	Cadmium Total Chromium Lead Copper Manganese Nickel Zinc Iron Magnesium Sodium	APHA 3111B (2005)
	pH	APHA 4500-H+B (2005)
	Total Suspended Solid	APHA 2540D (2005)
	COD	APHA 5220B (2005)
Environmental Monitoring - Oil Mill Effluents - Rubber Effluents	COD BOD (3 days @ 30?C) Oil &Grease Total Suspended Solids Total Kjeldhal Nitrogen Ammoniacal Nitrogen	DOE Standard Method (1995) (Reference Method)
Environmental Monitoring Air (industrial Hygiene)	Air Monitoring for Metal and Metallic compounds: Arsenic Cadmium Copper Lead Mercury Zinc Antimony	NIOSH Method No . 7900 (1994) NIOSH Method No . 7048 (1994) NIOSH Method No . 7029 (1994) NIOSH Method No . 7082 (1994) NIOSH Method No . 6009 (1994) NIOSH Method No . 7030 (1994) In-house Method [BLC132(I)] basedon NIOSH Method No. 7082 (1994)
Water - Portable Water - Domestic Water - Distilled Water - Ground Water - Industrial Or Cooling Water - Mineral Water - Processed Water - Reverse Osmosis Water - Steam Raising Water - Boiler Water - Surface Water - Swimming Pool And Spawater - Ultra Pure Water - Drinking Water Raw And Treated Water	Aluminium	(BLC-73) based on HACH Spectrophotometer Method 8012
	Silica	(BLC-72) based on HACH Spectrophotometer Method 8186
	Sulphate	(BLC-71) based on HACH Spectrophotometer Method 8051
	Fluoride	(BLC-70) based on HACH Spectrophotometer Method 8029
	Organic Nitrogen	(BLC-69) based on HACH Spectrophotometer Method 8075 &8038
	Nitrite	(BLC-68) based on HACH Spectrophotometer Method 8153
	Nitrate	(BLC-67) based on HACH Spectrophotometer Method 8039
	Nitrogen Ammonia	(BLC-66) based on HACH Spectrophotometer Method 8038

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Total Chlorine Chromium Hexavalent Cyanide Phenol Sulphide Turbidity Total Kjeldhal Nitrogen	(BLC-59) based on HACH Spectrophotometer Method 8167 (BLC-60) based on HACH Spectrophotometer Method 8023 (BLC-61) based on HACH Spectrophotometer Method 8027 (BLC-62) based on HACH Spectrophotometer Method 8047 (BLC-63) based on HACH Spectrophotometer Method 8131 (BLC-64) based on HACH Spectrophotometer Method 8237 (BLC-65) based on HACH Spectrophotometer Method 8075
	Colour as PtCo	(BLC-75) based on HACH Spectrophotometer Method 8025
	Phosphorus	(BLC-74) based on HACH Spectrophotometer Method 8048
	Free Chlorine	(BLC-58) based on HACH Spectrophotometer Method 8021
	Boron	(BLC-57) based on HACH Spectrophotometer Method 8015
	Boron	APHA 4500-BB (2005)
	Cyanide	APHA 4500-CN-C&D (2005)
	Nitrate Nitrogen	APHA 4500- NO3 - B (2005)
	Nitrite Nitrogen	APHA 4500- NO2 - B (2005)
	Phenol	APHA 5530D (2005)
	Phosphorus	APHA 4500-PE (2005)
	Sulphide	APHA C&D (2005)
	Sulphate	APHA E (2005)
	Total Chlorine	APHA (2005)
	Free/Residual Chlorine	APHA 4500-CIG (2005)
	Colour (Spectrophotometric Method)	APHA 2120D (2005)
	Colour (Visual Comparison Method)	*APHA 2120B
	Chloride	APHA (2005)
	Total Solids	APHA 2540B (2005)
	Total Dissolved Solids	APHA (2005)
	Total Hardness	APHA 2340C (2005)
	Alkalinity	APHA 2320B (2005)
	Nitric Acid Digestion	APHA 3030E (2005)
	Chromium Trivalent	In-house Method (BLC-78) based on APHA 3111B (2005) and APHA 3500-CrB (2017) / HACH Spectrophotometer Method 8023
	Mercury	APHA 3112B (2005)
	Arsenic	APHA 3114C (2005)

Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Tin	APHA 3111D (2005)
	COD Total Suspended Solids pH Cadmium Total Chromium Lead Copper Manganese Nickel Zinc Iron Magnesium Sodium	APHA 5220B (2005) APHA 2540D (2005) APHA 4500-H*B (2005) APHA 3111B (2005)
Environmental Monitoring Industrial Effluents Sewage/sewage Discharge Water Potable Water Domestic Water Distilled Water Ground Water Industrial/cooling Tower Water Mineral Water Process Water Reverse Osmosis Water Steam Raising Water Boiler Water Surface Water Swimming Pool And Spa Water Ultra Pure Water Drinking Water Raw And Treated Water River Water	Colour (ADMI Weighted- Ordinate Spectrophotometric Method)	APHA 2120 F (2017)
	Nitrogen (Ammonia) (Ammoniacal Nitrogen)	APHA B & C (2017)
	Chromium Hexavalent	APHA 3500-Cr B (2017)
	Oil and Grease (Liquid-Liquid, Partition-Gravimetric Method)	APHA 5520 B (2017)
	Biochemical Oxygen Demand (5-Day BOD Test)	APHA 5210 B (2017)
	Dissolved Oxygen	APHA 4500-0 G (2017)
	Temperature	APHA 2550 B (1) (2017)
Environmental Monitoring Industrial Effluents/ Influents Water Potable Water Domestic Water Distilled Water Ground Water Industrial/cooling Tower Water Mineral Water Processed Water Reverse Osmosis Water Steam Raising Water Boiler Water Surface Water Swimming Pool And Spa Water Ultra Pure Water Drinking Water Raw And Treated Water River Water	Aluminium Barium Selenium Silver	APHA 3030 F & 3120 B (2017)
	Formaldehyde	US EPA 8315A (rev.1) (1996)
	Fluoride	APHA 4500-F- B & D (2017)
Metals And Alloys - Solder	Sulphur	In-house Method [BLC130(I)] based on HACH Spectrophotometer Method 8051
	Phosphorus	In-house Method [BLC129(I)] based on HACH Spectrophotometer Method 8048
	Silver	MS 1004 : 1986
	Arsenic	JIS Z3910 Method for Chemical Analysis of Solder (1990)
	Aluminium	In-house Method [BLC126(I)] basedon JIS Z3910 Method for Chemical Analysis of Solder (1990)
	Copper Antimony Iron Nickel Bismuth Zinc Gold Cadmium Tin Lead	In-house Method [BLC125(I)] based on JIS Z3910 Method for Chemical Analysis of Solder (1990)

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Foods - Sugars And Sugar Products	Colour	Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 6, Page 210
	Moisture Polarisation Sulphated Ash	MS 5 Part 1: 2012
Animal Feeds	Sodium Chloride	MS 3:1982
	Total Ash	MS ISO 5984 :2003
	Crude Fibre	MS 1414 :1997
	Free Fatty Acid	MS 3 :1982
	Crude Fat	MS 1416 :1997
	Nitrogen	MS 3 :1982
	Moisture	MS ISO 6496:2003
Foods - Tomato/ Chili/ Oyster /soya Sauce	Total Solids Acidity pH Relative Density Salt Total Nitrogen Amino Nitrogen	MS 1120: 2012
Foods	Sugar	In-house Method [BLC159(1)] based on AOAC 4.7.02 & 44.1.15 21st Edition (2019) & Pearson?s Composition and Analysis of Foods 9th. Edition (1991) Chapter 6, Page 195
	Energy/Calories	AOAC (1993) Methods of Analysis for Nutrition Labeling Chapter 1
	Saturated Fat	In-house Method [BLC157(I)] based on MPOB P3.4 Part 1 & P3.5 (2004)
	Fat (Soxhlet Extraction System)	In-house Method [BLC156(I)B] based on MS 1416: 1997
	Fat (Acid Hydrolysis Method)	In-house Method [BLC156(I)A] based on AOAC 32.1.14 21st. Edition (2019)
	Protein	In-house Method [BLC153(1)] based on MS 3 :1982
	Carbohydrate (by difference)	Pearson?s Composition and Analysis of Foods 9th. Edition (1991) Chapter 13, Page 489
	Total Dietary Fiber	Methods of Analysis for Nutrition Labeling Chapter 16, Dietary Fiber(985.29: Total Dietary Fiber in Foods)
	Vitamin C	In-house Method [BLC155(I)] using HPLC
	Cholesterol	In-house Method [BLC152(I)] based on AOAC 45.4.06 21st Edition (2019)
	Phosphorus	Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 2, Page 37

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Sodium Chloride	In-house Method [BLC165(I)] based on MS 3: 1982
	Total Ash	In-house Method [BLC164(I)] based on MS ISO 5984: 2003
	Crude Fibre	In-house Method [[BLC163(I)] based on MS 1414: 1997
	Moisture	In-house Method [BLC162(I)] based on MS ISO 6496: 2003
	Colouring Matters	The Chemical Analysis of Foods 7th Edition (1976) Chapter 3, Page 53
	Mercury	In-house Method [BLC112(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 146
	Lead	In-house Method [BLC111(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 145
	Arsenic	In-house Method [BLC110(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 144
	Antimony	In-house Method [BLC161(I)] based on MS ISO 6869 : 2005
	Sodium Potassium Cadmium Tin	In-house Method [BLC109(I)] based on MS ISO 6869 : 2005
	Calcium Copper Iron Magnesium Manganese Zinc	MS ISO 6869 : 2005
	Boric Acid	AOAC 47.3.07 & 47.3.10 21st. Edition (2019)
	Benzoic Acid Sorbic Acid	In-house Method [BLC105(I)] using HPLC
	Sulphur Dioxide	The Chemical Analysis of Foods 7th. Edition (1976) Chapter 3, Page 29
Foods Meat, Poultry And Derived Products	Sodium Nitrite	AOAC 39.1.21 21st. Edition (2019)
Foods Nuts, Fruits And Vegetables And Derived Products	Aflatoxin	In-house Method [BLC150(I)] based on Veratox Quantitative Aflatoxin Test
Foods - Fish And Fish Products	Histamine	In-house Method [BLC151(I)] based on Veratox Quantitative Histamine Test
	Chloramphenicol	In-house Method [BLC149(I)] based on Veratox Quantitative Chloramphenicol Test

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Oleochemicals - Fatty Acids	Melting Point Impurities Fatty Acid Compositions	AOCS Cc 1-25 (2017) AOCS Ca 3a-46 (2017) AOCS Ce 1-62 (09)
	Colour	AOCS Cc 13b-45 (2017)/ AOCS Td 1b-64 (2017)
	Acid Value Iodine Value Saponification Value Titre Unsaponifiable Matter	AOCS Te 1a-64 (2017) AOCS Tg 1a-64 (2017) AOCS TI 1a-64 (2017) AOCS Tr 1a-64 (2017) AOCS Tk 1a-64 (2017)
Frozen Cooked & Peeled Prawns, Fish And Crustaceans (for Ministry Of Health Samples)	pH	Compendium of Methods for theMicrobiological Examination of Foods 5th. Edition, 2015
	Total Coliform Count Escherichia coli Count Coagulase Positive - Staphylococcus aureus Salmonella Vibrio cholerae Vibrio parahaemolyticus Standard Plate Count	MOH, ACCREDITATION COMMITTEE, 1982
Fish, Crustaceans, Precooked Seafoods, Meat And Poultry Products, Fruit Beverages, Cereal And Cereal Products, Confectionery Products, Sauces, Herbs, Jellies, Ready To Eat Foods, Salads, Processed Foods	Yeast Moulds	AS1766.2.2, 1997
	Clostridium perfringens Bacillus cereus	FDA-BAM CHAPTER 16, 1995 FDA-BAM CHAPTER 14, 1995
	Listeria spp.	FDA-BAM CHAPTER 10, 1995 Screening using Rapid Method(Tecra/Oxoid)
	Salmonella spp. Vibrio cholerae Vibrio parahaemolyticus	FDA-BAM CHAPTER 5, 2018 FDA-BAM CHAPTER 9, 2004 FDA-BAM CHAPTER 9, 2004
	Coagulase Positive ? Staphylococcus aureus	FDA-BAM CHAPTER 12, 1995
	Standard Plate Count Total Coliform Count Escherichia coli Count	FDA-BAM CHAPTER 3, 2001 FDA-BAM CHAPTER 4, 2002 FDA-BAM CHAPTER 4, 2002

SCOPE OF TESTING : CHEMICAL (PALM OIL PROGRAMME)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Environmental Monitoring - Industrial Effluents - Sewage / Sewage - Discharge	Nitrite	(BLC-68) based on HACH Spectrophotometer Method 8153
	Phosphorus	(BLC-74) based on HACH Spectrophotometer Method 8048
	Aluminium	(BLC-73) based on HACH Spectrophotometer Method 8012
	Silica	(BLC-72) based on HACH Spectrophotometer Method 8186

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Sulphate	(BLC-71) based on HACH Spectrophotometer Method 8051
	Fluoride	(BLC-70) based on HACH Spectrophotometer Method 8029
	Nitrate	(BLC-67) based on HACH Spectrophotometer Method 8039
	Nitrogen Ammonia	(BLC-66) based on HACH Spectrophotometer Method 8038
	Total Kjeldhal Nitrogen	(BLC-65) based on HACH Spectrophotometer Method 8075
	Sulphide	(BLC-63) based on HACH Spectrophotometer Method 8131
	Phenol	(BLC-62) based on HACH Spectrophotometer Method 8047
	Cyanide	(BLC-61) based on HACH Spectrophotometer Method 8027
	Chromium Hexavalent	(BLC-60) based on HACH Spectrophotometer Method 8023
	Total Chlorine	(BLC-59) based on HACH Spectrophotometer Method 8167
	Free Chlorine	(BLC-58) based on HACH Spectrophotometer Method 8021
	Boron	(BLC-57) based on HACH Spectrophotometer Method 8015
	Boron	APHA 4500-BB (2005)
	Cyanide	APHA (2005)
	Nitrate Nitrogen	APHA 4500- (2005)
	Nitrite Nitrogen	APHA (2005)
	Phenol	APHA 5530D (2005)
	Phosphorus	APHA 4500-PE (2005)
	Sulphide	APHA C&D (2005)
	Sulphate	APHA 4500-SQ (2005)
	Total Chlorine	APHA 4500-ClG (2005)
	Free/Residual Chlorine	APHA (2005)
	Colour (Spectrophotometric Method)	APHA 2120D (2005)
	Colour (Visual Comparison Method)	*APHA 2120B
	Chloride	APHA (2005)
	Total Solids	APHA 2540B (2005)
	Total Dissolved Solids	APHA 2540C (2005)
	Total Hardness	APHA 2340C (2005)
	Alkalinity	APHA 2320B (2005)
	Nitric Acid Digestion	APHA 3030E (2005)
	Chromium Trivalent	In-house Method (BLC-78) based on APHA 3111B (2005) and APHA3500-CrB (2017) / HACH Spectrophotometer Method 8023

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Tin Arsenic Mercury	APHA 3111D (2005) APHA 3114C (2005) APHA 3112B (2005)
	Cadmium Total Chromium Lead Copper Manganese Nickel Zinc Iron Magnesium Sodium	APHA 3111B (2005)
	pH	APHA 4500-H+B (2005)
	Total Suspended Solid	APHA 2540D (2005)
	COD	APHA 5220B (2005)
Environmental Monitoring - Oil Mill Effluents - Rubber Effluents	COD BOD (3 days @ 30?C) Oil &Grease Total Suspended Solids Total Kjeldhal Nitrogen Ammoniacal Nitrogen	DOE Standard Method (1995) (Reference Method)
Environmental Monitoring Air (industrial Hygiene)	Air Monitoring for Metal and Metallic compounds: Arsenic Cadmium Copper Lead Mercury Zinc Antimony	NIOSH Method No . 7900 (1994) NIOSH Method No . 7048 (1994) NIOSH Method No . 7029 (1994) NIOSH Method No . 7082 (1994) NIOSH Method No . 6009 (1994) NIOSH Method No . 7030 (1994) In-house Method [BLC132(I)] basedon NIOSH Method No. 7082 (1994)
Water - Portable Water - Domestic Water - Distilled Water - Ground Water - Industrial Or Cooling Water - Mineral Water - Processed Water - Reverse Osmosis Water - Steam Raising Water - Boiler Water - Surface Water - Swimming Pool And Spawater - Ultra Pure Water - Drinking Water Raw And Treated Water	Aluminium	(BLC-73) based on HACH Spectrophotometer Method 8012
	Silica	(BLC-72) based on HACH Spectrophotometer Method 8186
	Sulphate	(BLC-71) based on HACH Spectrophotometer Method 8051
	Fluoride	(BLC-70) based on HACH Spectrophotometer Method 8029
	Organic Nitrogen	(BLC-69) based on HACH Spectrophotometer Method 8075 &8038
	Nitrite	(BLC-68) based on HACH Spectrophotometer Method 8153
	Nitrate	(BLC-67) based on HACH Spectrophotometer Method 8039
	Nitrogen Ammonia	(BLC-66) based on HACH Spectrophotometer Method 8038

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Total Chlorine Chromium Hexavalent Cyanide Phenol Sulphide Turbidity Total Kjeldhal Nitrogen	(BLC-59) based on HACH Spectrophotometer Method 8167 (BLC-60) based on HACH Spectrophotometer Method 8023 (BLC-61) based on HACH Spectrophotometer Method 8027 (BLC-62) based on HACH Spectrophotometer Method 8047 (BLC-63) based on HACH Spectrophotometer Method 8131 (BLC-64) based on HACH Spectrophotometer Method 8237 (BLC-65) based on HACH Spectrophotometer Method 8075
	Colour as PtCo	(BLC-75) based on HACH Spectrophotometer Method 8025
	Phosphorus	(BLC-74) based on HACH Spectrophotometer Method 8048
	Free Chlorine	(BLC-58) based on HACH Spectrophotometer Method 8021
	Boron	(BLC-57) based on HACH Spectrophotometer Method 8015
	Boron	APHA 4500-BB (2005)
	Cyanide	APHA 4500-CN-C&D (2005)
	Nitrate Nitrogen	APHA 4500- NO3 - B (2005)
	Nitrite Nitrogen	APHA 4500- NO2 - B (2005)
	Phenol	APHA 5530D (2005)
	Phosphorus	APHA 4500-PE (2005)
	Sulphide	APHA C&D (2005)
	Sulphate	APHA E (2005)
	Total Chlorine	APHA (2005)
	Free/Residual Chlorine	APHA 4500-CIG (2005)
	Colour (Spectrophotometric Method)	APHA 2120D (2005)
	Colour (Visual Comparison Method)	*APHA 2120B
	Chloride	APHA (2005)
	Total Solids	APHA 2540B (2005)
	Total Dissolved Solids	APHA (2005)
	Total Hardness	APHA 2340C (2005)
	Alkalinity	APHA 2320B (2005)
	Nitric Acid Digestion	APHA 3030E (2005)
	Chromium Trivalent	In-house Method (BLC-78) based on APHA 3111B (2005) and APHA 3500-CrB (2017) / HACH Spectrophotometer Method 8023
	Mercury	APHA 3112B (2005)
	Arsenic	APHA 3114C (2005)

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
	Tin	APHA 3111D (2005)
	COD Total Suspended Solids pH Cadmium Total Chromium Lead Copper Manganese Nickel Zinc Iron Magnesium Sodium	APHA 5220B (2005) APHA 2540D (2005) APHA 4500-H*B (2005) APHA 3111B (2005)
Environmental Monitoring Industrial Effluents Sewage/sewage Discharge Water Potable Water Domestic Water Distilled Water Ground Water Industrial/cooling Tower Water Mineral Water Process Water Reverse Osmosis Water Steam Raising Water Boiler Water Surface Water Swimming Pool And Spa Water Ultra Pure Water Drinking Water Raw And Treated Water River Water	Colour (ADMI Weighted- Ordinate Spectrophotometric Method)	APHA 2120 F (2017)
	Nitrogen (Ammonia) (Ammoniacal Nitrogen)	APHA B & C (2017)
	Chromium Hexavalent	APHA 3500-Cr B (2017)
	Oil and Grease (Liquid-Liquid, Partition-Gravimetric Method)	APHA 5520 B (2017)
	Biochemical Oxygen Demand (5-Day BOD Test)	APHA 5210 B (2017)
	Dissolved Oxygen	APHA 4500-0 G (2017)
	Temperature	APHA 2550 B (1) (2017)
Environmental Monitoring Industrial Effluents/ Influents Water Potable Water Domestic Water Distilled Water Ground Water Industrial/cooling Tower Water Mineral Water Processed Water Reverse Osmosis Water Steam Raising Water Boiler Water Surface Water Swimming Pool And Spa Water Ultra Pure Water Drinking Water Raw And Treated Water River Water	Aluminium Barium Selenium Silver	APHA 3030 F & 3120 B (2017)
	Formaldehyde	US EPA 8315A (rev.1) (1996)
	Fluoride	APHA 4500-F- B & D (2017)
Metals And Alloys - Solder	Sulphur	In-house Method [BLC130(I)] based on HACH Spectrophotometer Method 8051
	Phosphorus	In-house Method [BLC129(I)] based on HACH Spectrophotometer Method 8048
	Silver	MS 1004 : 1986
	Arsenic	JIS Z3910 Method for Chemical Analysis of Solder (1990)
	Aluminium	In-house Method [BLC126(I)] basedon JIS Z3910 Method for Chemical Analysis of Solder (1990)
	Copper Antimony Iron Nickel Bismuth Zinc Gold Cadmium Tin Lead	In-house Method [BLC125(I)] based on JIS Z3910 Method for Chemical Analysis of Solder (1990)

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Foods - Sugars And Sugar Products	Colour	Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 6, Page 210
	Moisture Polarisation Sulphated Ash	MS 5 Part 1: 2012
Animal Feeds	Sodium Chloride	MS 3:1982
	Total Ash	MS ISO 5984 :2003
	Crude Fibre	MS 1414 :1997
	Free Fatty Acid	MS 3 :1982
	Crude Fat	MS 1416 :1997
	Nitrogen	MS 3 :1982
	Moisture	MS ISO 6496:2003
Foods - Tomato/ Chili/ Oyster /soya Sauce	Total Solids Acidity pH Relative Density Salt Total Nitrogen Amino Nitrogen	MS 1120: 2012
Foods	Sugar	In-house Method [BLC159(1)] based on AOAC 4.7.02 & 44.1.15 21st Edition (2019) & Pearson?s Composition and Analysis of Foods 9th. Edition (1991) Chapter 6, Page 195
	Energy/Calories	AOAC (1993) Methods of Analysis for Nutrition Labeling Chapter 1
	Saturated Fat	In-house Method [BLC157(I)] based on MPOB P3.4 Part 1 & P3.5 (2004)
	Fat (Soxhlet Extraction System)	In-house Method [BLC156(I)B] based on MS 1416: 1997
	Fat (Acid Hydrolysis Method)	In-house Method [BLC156(I)A] based on AOAC 32.1.14 21st. Edition (2019)
	Protein	In-house Method [BLC153(1)] based on MS 3 :1982
	Carbohydrate (by difference)	Pearson?s Composition and Analysis of Foods 9th. Edition (1991) Chapter 13, Page 489
	Total Dietary Fiber	Methods of Analysis for Nutrition Labeling Chapter 16, Dietary Fiber(985.29: Total Dietary Fiber in Foods)
	Vitamin C	In-house Method [BLC155(I)] using HPLC
	Cholesterol	In-house Method [BLC152(I)] based on AOAC 45.4.06 21st Edition (2019)
	Phosphorus	Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 2, Page 37

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Sodium Chloride	In-house Method [BLC165(I)] based on MS 3: 1982
	Total Ash	In-house Method [BLC164(I)] based on MS ISO 5984: 2003
	Crude Fibre	In-house Method [[BLC163(I)] based on MS 1414: 1997
	Moisture	In-house Method [BLC162(I)] based on MS ISO 6496: 2003
	Colouring Matters	The Chemical Analysis of Foods 7th Edition (1976) Chapter 3, Page 53
	Mercury	In-house Method [BLC112(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 146
	Lead	In-house Method [BLC111(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 145
	Arsenic	In-house Method [BLC110(I)] based on Pearson?s Composition and Analysis of Foods 9th Edition (1991) Chapter 5, Page 144
	Antimony	In-house Method [BLC161(I)] based on MS ISO 6869 : 2005
	Sodium Potassium Cadmium Tin	In-house Method [BLC109(I)] based on MS ISO 6869 : 2005
	Calcium Copper Iron Magnesium Manganese Zinc	MS ISO 6869 : 2005
	Boric Acid	AOAC 47.3.07 & 47.3.10 21st. Edition (2019)
	Benzoic Acid Sorbic Acid	In-house Method [BLC105(I)] using HPLC
	Sulphur Dioxide	The Chemical Analysis of Foods 7th. Edition (1976) Chapter 3, Page 29
Foods Meat, Poultry And Derived Products	Sodium Nitrite	AOAC 39.1.21 21st. Edition (2019)
Foods Nuts, Fruits And Vegetables And Derived Products	Aflatoxin	In-house Method [BLC150(I)] based on Veratox Quantitative Aflatoxin Test
Foods - Fish And Fish Products	Histamine	In-house Method [BLC151(I)] based on Veratox Quantitative Histamine Test
	Chloramphenicol	In-house Method [BLC149(I)] based on Veratox Quantitative Chloramphenicol Test

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Oleochemicals - Fatty Acids	Melting Point Impurities Fatty Acid Compositions	AOCS Cc 1-25 (2017) AOCS Ca 3a-46 (2017) AOCS Ce 1-62 (09)
	Colour	AOCS Cc 13b-45 (2017)/ AOCS Td 1b-64 (2017)
	Acid Value Iodine Value Saponification Value Titre Unsaponifiable Matter	AOCS Te 1a-64 (2017) AOCS Tg 1a-64 (2017) AOCS TI 1a-64 (2017) AOCS Tr 1a-64 (2017) AOCS Tk 1a-64 (2017)
Frozen Cooked & Peeled Prawns, Fish And Crustaceans (for Ministry Of Health Samples)	pH	Compendium of Methods for theMicrobiological Examination of Foods 5th. Edition, 2015
	Total Coliform Count Escherichia coli Count Coagulase Positive - Staphylococcus aureus Salmonella Vibrio cholerae Vibrio parahaemolyticus Standard Plate Count	MOH, ACCREDITATION COMMITTEE, 1982
Fish, Crustaceans, Precooked Seafoods, Meat And Poultry Products, Fruit Beverages, Cereal And Cereal Products, Confectionery Products, Sauces, Herbs, Jellies, Ready To Eat Foods, Salads, Processed Foods	Yeast Moulds	AS1766.2.2, 1997
	Clostridium perfringens Bacillus cereus	FDA-BAM CHAPTER 16, 1995 FDA-BAM CHAPTER 14, 1995
	Listeria spp.	FDA-BAM CHAPTER 10, 1995 Screening using Rapid Method(Tecra/Oxoid)
	Salmonella spp. Vibrio cholerae Vibrio parahaemolyticus	FDA-BAM CHAPTER 5, 2018 FDA-BAM CHAPTER 9, 2004 FDA-BAM CHAPTER 9, 2004
	Coagulase Positive ? Staphylococcus aureus	FDA-BAM CHAPTER 12, 1995
	Standard Plate Count Total Coliform Count Escherichia coli Count	FDA-BAM CHAPTER 3, 2001 FDA-BAM CHAPTER 4, 2002 FDA-BAM CHAPTER 4, 2002

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Foods - Edible Oils, Fats And Their Products	TBHQ	Handbook of Analysis and QualityControl for Fruit and Vegetable Products 2nd Edition Chapter 12, Page 318
	Rancidity	Pearson?s Composition and Analysis of Foods 9". Edition (1991) Chapter 16, Page 641

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	BHA BHT	The Chemical Analysis of Foods 7th Edition (1976) Chapter 3, Page 48 using HPLC
	Mineral Oils	The Chemical Analysis of Foods 7th Edition (1976) Chapter 14, Page 492
	Unsaponifiable Matter	AOCS Ca 6a-40 (2017)
	Refractive Index	AOCS Cc 7-25 (2017)
	Melting Point	AOCS Cc 3-25 (2017)
	Cloud Point	AOCS Cc 6-25 (2017)
	Insoluble Impurities	AOCS Ca 3a-46 (2017)
	Peroxide Value	AOCS Cd 8-53 (97)
	Saponification Value	AOCS Cd 3-25 (2017)
	Iodine Value	AOCS Cd 1b-87 (2017)/ AOCS Cd 1d-92 (2017)
	Colour	AOCS Cc 13b-45 (2017)
	Moisture & Volatile Matter (Oven Method) (Karl Fischer Method)	AOCS Ca 2c-25 (2017) AOCS Ca 2e-84 (2017)
	Acid Value	AOCS Cd 3d-63 (2017)
	Free Fatty Acid	AOCS Ca 5a-40 (2017)
	Fatty Acid Compositions	MS 817: 1989
	Anisidine Value	MS 817: Part 5: 1998
	Slip Melting Point Cloud Point Refractive Index Dobi	MS 817: 1989
	Colour	MS 817: Part 12: 2004
	Iodine Value	MS 817: Part 3: 1998
	Saponification Value	MS ISO: 3657: 2009
	Unsaponifiable Matter	MS 817: Part 7: Section 2: 2001
	Acidity	MS 817:1989
	Peroxide Value	MS 817: Part 11: 2004
	Impurities	MS 817:1989
	Volatile Matter	MS 817: Part 2: 1998

SCOPE OF TESTING : CHEMICAL (PALM OIL PROGRAMME)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Foods - Edible Oils, Fats And Their Products	TBHQ	Handbook of Analysis and QualityControl for Fruit and Vegetable Products 2nd Edition Chapter 12, Page 318
	Rancidity	Pearson?s Composition and Analysis of Foods 9". Edition (1991) Chapter 16, Page 641

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	BHA BHT	The Chemical Analysis of Foods 7th Edition (1976) Chapter 3, Page 48 using HPLC
	Mineral Oils	The Chemical Analysis of Foods 7th Edition (1976) Chapter 14, Page 492
	Unsaponifiable Matter	AOCS Ca 6a-40 (2017)
	Refractive Index	AOCS Cc 7-25 (2017)
	Melting Point	AOCS Cc 3-25 (2017)
	Cloud Point	AOCS Cc 6-25 (2017)
	Insoluble Impurities	AOCS Ca 3a-46 (2017)
	Peroxide Value	AOCS Cd 8-53 (97)
	Saponification Value	AOCS Cd 3-25 (2017)
	Iodine Value	AOCS Cd 1b-87 (2017)/ AOCS Cd 1d-92 (2017)
	Colour	AOCS Cc 13b-45 (2017)
	Moisture & Volatile Matter (Oven Method) (Karl Fischer Method)	AOCS Ca 2c-25 (2017) AOCS Ca 2e-84 (2017)
	Acid Value	AOCS Cd 3d-63 (2017)
	Free Fatty Acid	AOCS Ca 5a-40 (2017)
	Fatty Acid Compositions	MS 817: 1989
	Anisidine Value	MS 817: Part 5: 1998
	Slip Melting Point Cloud Point Refractive Index Dobi	MS 817: 1989
	Colour	MS 817: Part 12: 2004
	Iodine Value	MS 817: Part 3: 1998
	Saponification Value	MS ISO: 3657: 2009
	Unsaponifiable Matter	MS 817: Part 7: Section 2: 2001
	Acidity	MS 817:1989
	Peroxide Value	MS 817: Part 11: 2004
	Impurities	MS 817:1989
	Volatile Matter	MS 817: Part 2: 1998

SCOPE OF TESTING : MICROBIOLOGY

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Bottled Water, Mineral, Water - Recreational Water, - Portable Water & - Industrial Water - Purified Water	Standard Plate Count Coliform Count Fecal Coliform Fecal Streptococci Pseudomonas aeruginosa Legionella spp.	APHA 9215B & APHA 9215D, 2005 APHA 9221B & APHA 9222B, 2005 APHA 9221E, 2005 APHA 9230B, 2005 APHA 9213F, 2005 APHA 9260J, 2005

Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Cosmetic	Standard Plate Count Yeast Moulds Staphylococcus aureus Pseudomonas aeruginosa	FDA-BAM CHAPTER 23, 1995
Microbiological Monitoring (environmental Sampling And Monitoring)	Air Monitoring for Total - Bacteria and Total Fungus -Count by Impingement - Methods Sedimentation Methods Swab Contact Methods Rodac Plate (Agar Contact) - Methods	In-house Methods [BLM27] basedon Compendium of Methods for the Microbiological Examination of Foods 3rd. Edition, 1992
Microbiological Examination (non-sterile Products/ Gloves/medical Devices/ Medical Products)	Bioburden Test Membrane Filtration	British Pharmacopoiea 1998, Volume II, Appendix XVIB A 245 & European Pharmacopoiea 4th. Edition, 2002
Canned Foods	pH	Compendium of Methods for theMicrobiological Examination of Foods 5th Edition, 2015
	Flat Sour Organisms Anaerobic Organisms Leakage Organisms - (Sterillity Test)	FDA-BAM CHAPTER 21,1995

Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)

SITE LOCATION (HQ)	1. Biochem Laboratories Sdn Bhd, 101-07-03 Menara Perdana Jalan Gurdwara, Georgetown 10300 Pulau Pinang, MALAYSIA
FIELD(S) OF TESTING :	CHEMICAL,MECHANICAL,MICROBIOLOGY

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Environmental Monitoring - Stack/ Flue Gas - Air Emission From Stationary Sources	Dark Smoke	BS2742:2009
	Carbon Monoxide (CO)	USEPA 40 CFR 60, App.A, Method No.10
	Oxygen (O2) Carbon Dioxide (CO2)	USEPA 40 CFR 60, App.A, Method No.3A
	Hydrogen Halide (HCI, HBr, HF) Halogen (Cl2, Br2, F2)	USEPA 40 CFR 60, App.A, Method No. 26A
	Nitrogen Oxide, Nitrogen Dioxide	USEPA 40 CFR 60, App.A, Method No. 7E
	Sulfur Dioxide, Sulfuric Acid	USEPA 40 CFR 60, App.A, Method No. 8
	Sulfur Dioxide	USEPA 40 CFR 60, App.A, Method No. 6C
	Particulate Matter	MS 1596:2003
	Particulate Matter	USEPA 40 CFR 60, App.A, Method No. 5
	Metals: (Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Hg, Ni, P, Se, Ag, TI, Zn, Al, Fe)	USEPA 40 CFR 60, App.A, Method No. 29

SCOPE OF TESTING : MICROBIOLOGY

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques

SCOPE OF TESTING : MECHANICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Noise	Boundary Sound Pressure Level	Guidelines for Environmental Noise Limit 2019 (Annex B)

Issue date: 18 March 2025
Valid Until: -

NO: SAMM 020
(Issue 1, 18 March 2025 replacement
of SAMM 020 dated 18 March 2025)