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NO: SAMM 238

LABORATORY LOCATION/ CENTRAL OFFICE:	Chemsain Konsultant Sdn Bhd (Kota Kinabalu) Lot 7, Lorong Suria, Off Lorong Buah Duku 1 Taman Perindustrian Suria Jalan Kolombong, 88450 Kota Kinabalu, Sabah , 88450, SABAH MALAYSIA
ACCREDITED SINCE :	26 MARCH 2025
FIELD(S) 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).

CENTRAL LOCATION:	Chemsain Konsultant Sdn Bhd (Kota Kinabalu) Lot 7, Lorong Suria, Off Lorong Buah Duku 1 Taman Perindustrian Suria Jalan Kolombong, 88450 Kota Kinabalu, Sabah , 88450, Sabah
FIELD(S) OF TESTING :	CHEMICAL, MICROBIOLOGICAL

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
#name?	Procedure (TCLP)	None
	- Selenium (Se)	None
	- Silver (Ag) - Arsenic (As)	None
	Tensile Test, Bend and Rebend Test	BS EN 10080:2005 Clause 9
	recognized as safe (GRAS)	with reference to EPA 3051 A
	300 mm to 600 mm	5 yum
	300 mm to 600 mm	5 yum
	300 mm to 600 mm	5 yum
	300 mm to 600 mm	5 yum
	300 mm to 600 mm	5 yum
	300 mm to 600 mm	5 yum

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	-100 °C to 1300 °C	0.70 °C
	-100 °C to 1100 °C	0.58 °C
	0 °C to 1700 °C	1.9°C
	-100 °C to 1300 °C	0.70 °C
	-100 °C to 1200 °C	0.58 °C
	0 °C to 1700 °C	1.9°C
	-80 °C to -20 °C -20°C to 5 °C 5°C to 50°C 50°C to 100°C 100°C to 140°C	0.07 °C 0.07 °C 0.07 °C 0.07 °C 0.07 °C
	-20°C to 140 °C -80 °C to 140 °C to 90 °C	1.2°C
	-80 °C to -20 °C	None
	-20 °C to 140 °C	0.1 °C
	-20 °C to 140 °C	None
	-80 °C to -20 °C	None
	-20 °C to 140 °C	0.1 °C
	-20 °C to 140 °C	None
	-20 °C to 140 °C	None
	-20 °C to 140 °C	None
	-20 °C to 140 °C	None
	-100 °C to 1300 °C	0.5 °C
	-10 °C to 110 °C	0.1 °C
	-10 °C to 110 °C	0.1 °C
	-10 °C to 110 °C	None
	-100 °C to 1200 °C	0.6 °C
	-100 °C to 1300 °C	0.6 °C
	-100 °C to 400 °C	0.6 °C
	Spectrometry	None
& Product	None	None
(solid, Semi-solid &	None	None
Ambient Air E	Nitric Acid (HNOs)	None
	Antimony (Sb)	OSHA Method ID-125G
	Total Suspended Particulate	AS/NZS 3580.9.3 (2015)
	PM10	AS/NZS 3580.9.6 2015
Animal Feeds E	None	None
Biodiesel Blend E	FAME Content	EN 14078-2002 (by FTIR)
Biodiesel E	Mercury (Hg)	UOP 938 -” 10
Bird Nest E	Nitrite & Nitrate	In-house Method 0541 based on MS 2509: 2012 (P) & IC
Boiler Water	Total Dissolved Solids	APHA 2540 C, 2017
	Acidity	APHA 2310. B
	Acidity	APHA 2310. B
Boiler Water Industrial/cooling Purposes Reverse Osmosis	Ammoniacal Nitrogen (as N) Total Nitrogen, Kjeldahl (as N)	APHA F, 2017 APHA 4500-Norg B,2017
Crude Oil (evolved Gas)	Compositional analysi: Hydrocarbons (C1 -” C12+), CO2, No	In-House Method 0548 (Based on GPA 2286-95)
Crude Oil E	Density, Specific Gravity and API	ASTM D 1298 -” 17

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Dairy Products	Moisture	In-house Method 0509 based on
	Majonnier Fat	AOAC 932.06, Edition
	None	None
	None	None
	Shigella species	FDA-BAM Chapter 6, 2014
	None	None
	None	None
	None	AOAC, 1993)
	None	None
	Water activity	AOAC 978.18 (2000)
	None	Fluorescence Detection
	Vitamin B5	In-house method LWI-TEC-
	None	None
	Ascorbic Acid	In-house method LWI-TEC-
	Vitamin A (Retinol)	In-house method LWI-TEC-
	None	None
	None	(Pour Plate Technique)
	None	(Detection, MPN & Spread Plate
	Enterobacteriaceae Detection	ISO 21528-1: 2004
	Aerobic Plate Count	3M-„¢ Petrifilm-„¢ Rapid Aerobic
	None	None
Domestic	None	None
	Boron	APHA 4500-B C, 2017
	None	APHA 5220 C, 2017
	Iron	None
	None	None
Drinking Water	Chlorite (ClO2)	In House Method 6023, based on
	None	None
	None	None
	Mineral Oil	APHA 5520 F
	Fluoride	APHA C
	None	None
	Heterotrophic Plate Count	APHA 9215 D
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	126, based on Thermo Fisher Application Noted 154
	Phenol	APHA 6420C, 24" Edition
	None	In-house method SGS-TM-ENVI-W-
	Organochlorine Pesticide	APHA 6630B, 24" Edition
	Conductivity	APHA 2510 B
	None	Boiling Cell Method

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	QIAGEN Mericon? Bacteria Kit
	None	spp. by Gel Electrophoresis
	None	monocytogenes by Gel
	None	Real Time Polymerase Chain
	and Escherichia coli count	9222 H
	Coliform and Escherichia coli	Presence/absence Technique
	pH	APHA 4500-H* B
	Colour	APHA 2120B
	Turbidity	APHA 2130B
	Free Chlorine	HACH Method No . 8021
	Ammonia as N	HACH Method No . 8038
	as Fe	HACH Method No . 8008
	Manganese as Mn	HACH Method No . 8149
	Fluoride as F	HACH Method No . 8029
	Aluminium as Al	HACH Method No . 8326
	pH	APHA 4500-H* B
	Colour	APHA 2120B
	Turbidity	APHA 2130B
	Free Chlorine	HACH Method No . 8021
	Ammonia as N	HACH Method No . 8038
	as Fe	HACH Method No . 8008
	Manganese as Mn	HACH Method No . 8149
	Fluoride as F	HACH Method No . 8029
	Aluminium as Al	HACH Method No . 8326
	Total Dissolved Solids	APHA 2540. C
	Total Dissolved Solids	APHA 2540. C
Edible Oil, Fats And	None	Pearson-™s Chemical Analysis of
Environmental Monitoring	None	None
	Boron	APHA 4500-B C, 2005 APHA 4500-B C, 2017
	Sulphide	APHA 4500- D, 2005 APHA 4500-D, 2017
	Metal Analysis by ICP-OES	None
	Hydrocarbon	APHA 5520 F 2005
	None	None
	Hydrogen Bromide (HBr)	OSHA Method ID-165SG
	Temperature	APHA 2550 B, 2005
	None	None
	None	None
	Formaldehyde	In-house Method C/WTR/012
	None	None
	Aluminium	None
	Aluminium	None
	Nickel	APHA 3120 B, 24" Edition
	pH	APHA 4500 H*B
	pH	APHA 4500 H*B
	None	None
	None	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	COD	APHA 5220 D
	Heavy Metals	None
	Moisture	EPA Method 9000 (Karl Fischer Titration)
	None	EPA Method 1010 A
	None	Information Circular 8333,
	Total Bacteria Count	Compendium of Methods for the
	Aerobic Plate Count	In-house swab contact method
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
Environmental Monitoring Soil	Hexane Extractable Material	USEPA 9071B, April 1998
Environmental Sample	None	None
Fertilizer	None	None
	Determination of Phosphorus,	In-House Method, TM-02
	Total Nitrogen (as N)	In-house Method, Ref. No. F2, based
Fish And Fish	None	None
Fish And Fish E	Formaldehyde	In-house Method 0536 based on
Flour And Confectionary	None	Pearson-™s Chemical Analysis of Food (8th Edition)
Foam Concentrates E	PH value	APHA 4500-H+ B, 2017
Food & Food E	Yeasts & Molds Count	FDA / BAM Chapter 17, 5th
Foods	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Macrolides:	In-house Method, Ref. No. MOH D03-
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	None	None
	None	None
	None	None
	Nitrogen / Protein	AOCS Ac 4-91
	None	None
	None	None
	None	In-house Method, Ref. No. MOH
	None	E03-014, Determination of
	1) Methyl paraben 2) Ethyl paraben	In-house Method, Ref. No. MOH E03-019, The Determination of
	None	In-house Method, Ref. No. MOH E03-023, Determination of Maleic
	None	None
	None	Method for Acidity in
	None	In-House Method, MOH J03-001
	None	In-House Method, MOH J03-002
	None	In-house Method, Ref. No., MOH J03-034 Determination of Caffeine
	None	None
	7) Triadimefon 8) Trans-chlordane 9) Cis-chlordane	In-house Method, Ref. No. MOH F03-009, Based on Journal of AOAC
	None	In-house Method, Ref. No. MOH
	6) Cyanofenphos 7) Chlorpyrifos methyl	In-house Method, Ref. No. MOH F03-010,
	1) Alpha HCH 2) Dichloran	None
	*Lead *Cadmium	based on AOAC 999.10,1999,
	None	In-house Method, Ref. No. MOH H03-002 Determination of Heavy
	Sucrose	AOAC 977.20, 2006,
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Metals	In-house method LWI-MFF 021
	Sodium as Na Iron as Fe Calcium as Ca	based on AOAC 968.08 (Sample Preparation) & USEPA 6010 B
	Copper as Cu	None

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
	Manganese as Mn	None
	Zinc as Zn	None
	Cadmium as Cd	None
	Antimony as Sb	None
	Tin as Sn	None
	Lead as Pb	None
	Fat in Dried Milk	AOAC 932.06
Formation Water	Hardness by Calculation	APHA 2340 B, 2017
	Chromatography	None
	Salinity	APHA 2520 B, 2017
	None	ASTM D 4052-11
	Tin (Sn)	In House Method 0582 Based on
	None	UOP938 -” 10
Formation Water E	Metal Analysis by ICP-OES	None
	Anion Analysis by Io	None
Formation Water Sea Water	Chemical Oxygen Demand	In House Method 0560 based on APHA 5220 C 2017 & USGS
Formation Water Surface Water	Oil and Grease	APHA 5520 B, 2017
Fuel Oil Spent Lubricating Oil / Spent Hydraulic Oil	Density, Relative Density, and API Gravity of Liquids	ASTM D 4052-18 by Digital Density Meter
Ground Water	Acidity	APHA 2310 B, 2017
	None	None
	None	None
	None	None
	Bromate	S-170 & APHA 4110 B
	None	None
	Color (color units)	APHA 2120 C 2017
	Oil and Grease (Mineral)	APHA 5520 F, 2017
	Metals by Inductively Coupled Plasma	APHA 3120 B
	None	None
	Faecal Coliform	APHA 9222 D
	Lead	None
	None	None
	Endosulfan Hexachlorobenzene	None
	Cobalt	APHA 3120 B, Edition
	(Refer to Appendix 8 for the list of compounds)	Method 8260C: 2006
	BODs at 20°C	APHA 5210 B & G
	None	(Membrane Filtration Method)
	None	None
	None	None
Industrial Effluent E	None	None
	None	None
	Sodium (Na)	APHA 3120 B, 2005
	None	None
	Mercury	In House Method 0556 based on
	Paraquat	In House Method 0598 based on

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	APHA 2550 B, 2017
Industrial Effluent E Leachate E	Colour (Hazen Units)	APHA 2120 B, 2005 APHA 2120 B, 2017
Industrial/cooling Purposes	Total Suspended Solids	APHA 2540 D, 2017
	Anionic surfactant as MBAS	APHA 5540 C, 2017
	Aldrin	None
Leachate E	Fluoride	APHA C, 2005
	None	None
Leachate E Sewage Water E	Free Carbon Dioxide	APHA 4500-CO2C, 2005 APHA 4500-CO2C, 2017
Liquid)	None	None
Lubricating Oil Diesel	Sediment Content	ASTM D 473-17e1 By Extraction
Marine Water	Iodide	None
	None	APHA 3120 B, 2017
	Unionised Ammonia	In House Method 0590 adopted
	None	None
	Total Suspended Solids	APHA 2540 D
	Chromium (III)	based on APHA 3120 B, APHA 3125 B and APHA 3500-Cr B (Calculation)
	Copper (Cu)	In-house method SGS-TM-ENVI-003 based on APHA 3125 B
	Cyanide (CN)	APHA 4500-CN C & E, 24" Edition
	Unionized Ammonia (NH3)	In-house method SGS-TM-ENVI-W- 097 based on APHA 4500-NHs F
	Ammoniacal nitrogen (NH3-N).	APHA 4500-NHs F, Edition
	Nitrite (NO2)	APHA 4500-NOz B, 24" Edition
	Nitrate (NO3)	APHA E, 24' Edition
	Ortho-Phosphate (as POs or P)	APHA 4500-P E, Edition
	Total Phosphate (as POs or P)	APHA 4500-P B & E, Edition
	Phenol	APHA 5530 B & C, Edition
	Total Suspended Solids	APHA 2540 D, 24" Edition
	Dissolved Oxygen (In-Situ)	APHA 4500-0 G, Edition
	Temperature (In-Situ)	APHA 2550 B, 24" Edition
	pH	APHA 4500-H* B, Edition
	Colour	APHA 2120 F, 24" Edition
	Paraquat & Diquat	In-house method SGS-TM-ENVI-109 based on EPA 549.2
	Chlorinated Phenoxyacid Compounds - 2,4-D, 2,4,5-TP, 2,4,5-T & Dinoseb	In-house method SGS-TM-ENVI-004 based on EPA 8321 B
	Lead, Pb	None
	Uranium, U	None
	None	In-house method, SGS-TM-MICR-
	Turbidity	APHA 2130 B, 2005
	Free, Combined and Total	In-House Method 0501 based on
	Free, Combined and Total	In House Method 0501 based on

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Salinity	APHA 2520. B
	Salinity	APHA 2520. B
Marine Water E Surface Water E	Total Petroleum Hydrocarbon	In House Method 0539 based on TNRCC method 1005, rev 03, 1st
Meat, Poultry And Derived Products Non-alcoholic Beverages	Carbohydrate (by difference)	In-house Method 0512 based on Methods of Analysis for Nutrition Labeling (AOAC 1993)
Methanol E	Permanganate Time	ASTM D1363-11
Microbiological	None	None
Microbiological Environmental Sample	Total Coliform by Membrane Filtration	In House Method 0606 based on APHA 9222 B, 2017
Microbiological Foods	None	None
Mills	Chemical Oxygen Demand	DOE 2019, Reference Method
Mineral Water	Alkalinity	APHA 2320 B, 2017
	Free Carbon Dioxide	APHA 4500-COz C, 2017
	Sodium (Na)	APHA 3120 B 2017
	None	None
	None	None
	Dieldrin	None
	None	None
	None	None
	None	None
	None	None
	Aluminum as Al	None
Mineral Water Processed Water	Biochemical Oxygen Demand 5 days @ 20°C	APHA 5210 B & 4500-0 C, 2017 APHA 5210 B & 4500-0 G, 2017
Miscellaneous Materials	None	None
Natural Gas	Hydrocarbons (C1 -” C12+), CO2,	None
Noise E	Noise Monitoring	ISO 1996-1: 2016
Nuts, Fruits And Vegetables And Derived Products Sauces, Herbs,	Energy (by calculation)	In-house Method 0513 based on Methods of Analysis for Nutrition Labeling (AOAC 1993)
Petroleum & Petroleum	None	None
	Aluminium	None
	None	None
Petroleum & Petroleum Products	Flash point (Pensky-Martens Closed Cup)	ASTM D 93 20 (Procedure A)
Petroleum & Petroleum Products Crude Oil E	Density and Relative Density Light Hydrocarbon C1 to C6+	ASTM D 5002-19 By Digital Density Analyzer (2010)
Petroleum And Petroleum Products Jet A-1 E	Density @15°C, kg/ms Distillation Electrical Conductivity, pS/m	ASTM D 4052-18 ASTM D 86-20 ASTM D 2624-15
Petroleum Gases	None	None
Petroleum Products	None	None
	None	None
	Standard Test Method for	None
Pigging Debris E	None	UOP938 -” 10
Potable And	None	None
	Chemical Oxygen Demand	APHA 5220 B, 2017

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Potable And E	Colour (Hazen Units)	APHA 2120 B, 2017
Potable Water	Metal Analysis by ICP-OES	None
	None	None
	None	None
	None	None
	None	None
	Mercury (Hg)	In House Method 0556 based on
	None	None
	Chromium	None
	None	None
	None	None
	None	AS/NZS 1766.2.9 ? 1997 of Australian/New Zealand Standard?
Potable Water E	Chloride (CI)	APHA 4110 B 2017
Pressurized Crude E Oils Crude Oil E	Shrinkage Factor Analysis	In-House Method 0531 (Based on API MPMS Chapter 20 (Section 1), Chapter 11.1)
Processed Water	Hardness, EDTA Trimetric	APHA 2340 C, 2017
	Tin	None
	Heptachlor epoxide	None
	Fluoride Nitrate	APHA 4110 B (Ion Chromatography), 24' Edition
Processed Water Formation Water	Chloride	APHA 4500-CI B, 2017
Produced Gas	No	None
Produced Water	None	None
	Density	In-house Method 0555 based on
Produced Water E	None	None
	Chromatography	None
Products	Ash	In-house Method 0510 based on
	None	AOAC 964.21
	None	None
	None	Edition, 1978
	None	None
	None	None
	None	2:2009
	Bioburden Estimation	ISO 11737-1:2006
	Sterility Test	ISO 11737-2:2009
	Endotoxin in Medical Devices	USP 29' Edition (LAL Gel Clot
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	None	None
	None	None
	Bend Performance	Clause 7.2.4 e
	Lithium, Li Vanadium,V	001 with reference to USP 39 and USP 40
	None	nicotinic acid and nicotinamide in
	None	None
	phthalate, DIBP	None
	Dibutyl phthalate, DBP	006, with reference to ISO 8124-
	None	None
	None	None
	None	L03-007-Determination of Aflatoxin
	None	G03-123(1)-Detection of Maize in
	None	G03-143(1)-Detection of Event-Specific
	None	G03-143(2)-Detection of Event-Specific
	None	G03-143(3)-Detection of Event-Specific
	None	G03-143(5)-Detection of Event-Specific
	None	G03-143(4)-Detection of Event-Specific
	NoneNone	None
	None	
	None	None
	Ultimate Tensile Strength e	(ref no: QA/METAL/05)
	None	None
	Monosodium Glutamate	F024 by HPLC Fluorescence
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Aerobic Plate Count	None
	Total Coliform Count	FDA-BAM, Ed, Chap 4
	Fecal Coliform	None
	Salmonella spp.	FDA-BAM, Ed, Chap 5
	- Sulphate	BS 1377, 1990-Part 3 Section 5
	- pH Value	BS 1377, 1990-Part 3 Section 9
	- Loss on Ignition	BS 1377, 1990-Part 3 Section 4
	Average Grain Size Measurement	Method)
	- Rockwell Method	ASTM E18: 20
	Break Test (Filled Weld)	None
	Properties Measured /	Method/

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Total Plate Count	Plating
	Coliform	Determination of Coliform & E.coli
	Escherichia Coli	(Pour Plate Method) - AOAC
	Escherichia Coli	performance tested. Certificate no.
	Escherichia Coli	020902
	Coliform	AOAC 998.08. Edition,
	Escherichia Coli (Petrifilm)	2019/Petrifilm
	Staphylococcus Aureus (Petrifilm)	AOAC 2003.11. 21% Edition,
	Staphylococcus Aureus (Petrifilm)	2019/Petrifilm
	Salmonella (Petrifilm)	AOAC 2014.01. 21% Edition, 2019/Petrifilm
	Salmonella	FDA BAM Chapter 5. 2020;
	(Alpha Tocopherol, Alpha Tocotrienol,	70, No. 12, December 1993/HPLC
	Beta Tocotrienol, Gamma Tocotrienol,	None
	Delta Tocotrienol)	None
	Phytosterols Content	EvTM_0008/HPLC
	(Sitosterol, Stigmasterol)	None
	Plant Squalene	EvTM_0007/HPLC
	Solvent Residue	EvTM_0005/GC Headspace
	(Hexane, Ethyl Acetate, Methanol,	None
	Isopropanol, Dichloromethane,	None
	Ethanol)	None
	Benzo A Pyrene	EvTM_0004, Based on AOCS Cd
	Benzo A Pyrene	21 - 91, 5''' Edition (2003)
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	Mixed Carotene	None
	Mixed Carotene	EvTM_0150/HPLC
	Solvent Residue	EvTM_0151/GC-HS
	(Hexane, Ethyl Acetate, Methanol,	None
	Isopropanol, Dichloromethane,	None
	Ethanol)	None
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	None	None
	2,6-Di-Tert-Butyl Hydroxytoluene	EvTM_0049/GC
	Tocotrienol, Beta Tocotrienol,	1993/HPLC
	Gamma Tocotrienol, Delta	None
	Tocotrienol)	None
	Benzo A Pyrene	EvTM_0114, Based on AOCS Cd 21-91, 5th Edition (2003)
	Mixed Carotene	EvTM_0115/HPLC
	Mixed Carotene	EvTM_0116/UV-VIS
	Lycopene Content	EvTM_0118/UV-VIS
	Plant Squalene	EvTM_0124/HPLC

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Phytosterols Content (Sitosterol, Stigmasterol)	EvTM_0125/HPLC
	Solvent Residue (Hexane, Ethyl Acetate, Methanol,	EvTM_0126/GC HS
	lsopropanol, Dichloromethane,	None
	Ethanol)	None
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds	BP 2020/Volume
	Count	XVI B
	Coliform Count	FDA BAM Chapter 4, 2020
	Bile-Tolerant Gram-Negative	BP 2020/Volume
	Bacteria	XVI B
	Detection of Specific Microorganism	BP 2020/Volume
	Pseudomonas aeruginosa	IV/Appendix XVI B
	Staphylococcus aureus	None
	Escherichia coli	None
	Salmonella spp	None
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds	BP 2020/Volume
	Count	XVI B
	Coliform Count	FDA BAM Chapter 4, 2020
	Bile-Tolerant Gram-Negative	BP 2020/Volume
	Bacteria	XVI B
	Detection of Specific Microorganism	BP 2020/Volume
	Pseudomonas aeruginosa	XVI B
	Staphylococcus aureus	None
	Escherichia coli	None
	Salmonella spp	None
	None	spp. by Real-Time PCR (qPCR) -” SYBR
	None	None
	None	in Soybean by real-Time PCR (qPCR)
	None	DNA (Universal Plant) by Real-Time
	Free Fatty Acids	None
	Moisture and Volatile Matter Hot	AOCS Ca 2b-38 (1997)
	Plate Method	None
	Insoluble Impurities	AOCS Ca 3a-46 (1997)
	lodine Value of Fats and Oils	None
	Cyclohexane-Acetic Acid	AOCS Cd 1d-92 (1997)
	Method	None
	Slip Melting Point	None
	AOCS Standard Open Tube	AOCS Cc 3-25 (1997)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Melting Point	None
	Color	AOCS Cc (1997)
Raw Water	None	None
	None	None
	None	None
	Anionic Surfactants as MBAS	APHA 5540 C
	Turbidity	APHA 2130 B
	pH	APHA 4500 - H*B
	Color	HACH Method No. 8025
	Lead as Pb	APHA 3111 B
	Total Solid	APHA 2540 B
	Beryllium as Be	None
Reverse Osmosis	Temperature	APHA 2550 B, 2017
	Aerobic Endospores	APHA 9218 B
	Chloroamines	APHA 4500-Cl G
	Standard Total Coliform	APHA 9222 B
	None	None
	None	None
Reverse Osmosis Water	Free, Combined and Total Residual Chlorine (DPD)	In-House Method 0501 based on Palintest Comparator
	Total Alkalinity as CaCOs	APHA 2320 B
	None	None
	Copper Barium	APHA 3125 B (ICP-MS), 24" Edition
	None	APHA 4500 OG
	None	APHA 9222
	Streptococcus Count	(Membrane Filtration Method)
River Water	Uranium (U)	In House Method 0582 based on
	Oil and Grease (Emulsified	APHA 5520 B & F, 2017
	None	None
	Total Phosphorus	USEPA Method 200.7
	Total Phosphate	USEPA Method 200.7
	None	None
	Enumeration of Escherichia coli	APHA 9221 G
	Standard Total Coliform	APHA 9222 B
	Colour (ADMI)	APHA 2120 F, 24" Edition
	Petroleum Hydrocarbon (C6-C10)	In-house method SGS-TM-ENVI-S- 001 (Solvent Extraction / Purge-and- Trap GC-MS)
	None	018 based on APHA 9222 B (Membrane Filtration)
	Sulphite -” Reducing Anaerobes	ISO 6461/2:1986 (Membrane
	Total Coliform Count	APHA 9222 B
	Total Dissolved Solid	APHA 2540 C
	Barium as Ba	None
	None	None
	None	None
River Water E	Paraquat	In House Method 0598 based on

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Saline Water	Ammonia -" N	In-house Method 0554 based on
	None	None
	Temperature	APHA 2550 B, 2005
Sample	Standard Plate Count	AS 1766.2.1-1991
Sea Water	None	None
	None	None
	None	None
	(by Calculation)	from Unionised Ammonia Calculator
	None	None
Sediment	Organic Carbon	MS 2469: 2012
	Antimony (Sb)	& USEPA 6010 B, Revision 2,
	Silica Gel Treated N-Hexane	In House Method 0559 based on
	sand, silt and clay)	BS1377 Part 2 1990
	compounds)	Trap GC-MS)
	Al, V, Mo, Sb, Fe, Li, Sr, Sn, Ti	EPA Method 3050B: 1996; EPA Method 6020B: 2014 (ICP-MS)
	Sulphate	BS1377-3:2018 (A1:2021) (Gravimetric)
	Nitrogen (as TKN)	In-house method, SGS-TM-ENVI-S- 005, based on EPA 1687
Sewage Water E	Turbidity	APHA 2130 B, 2005 APHA 2130 B, 2017
	None	APHA 4500-F- C, 2017
	pH Value	APHA 4500-H+ B, 2005 APHA 4500-H+ B, 2017
Sewage Water E Wastewater E	Boron	APHA 3120 B 2005 APHA 3120 B 2017
Sludge	None	None
	Extractable Materials	USEPA 9071B Revision 2 (April
	None	None
Sludge Solid Waste	Arsenic (As) Barium (Ba)	December 1996
Soil	pH Value	BS 1377-3:1990:9.5
	None	None
	Aluminum (Al)	USEPA 200.2, Revision 2.8, 1994
	Particle Size Distribution (gravel,	In House Method 0588 based on
	Determination of Particle Size Distribution for Soils	BS 1377: Part 2: 1990 Clause 9
	Determination of Moisture Content	BS 1377: Part 2: 1990 Clause 3.2
	Determination of the Liquid Limit (Casagrande apparatus method)	BS 1377: Part 2: 1990 Clause 4.5
	Determination of the Plastic Limit and Plasticity Index	BS 1377: Part 2: 1990 Clause 5
	Determination of dry density/moisture content relationship (Rammer Method)	BS 1377: Part 4: 1990 Clause 3.3, 3.4, 3.5 & 3.6

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Determination of dry density/moisture content relationship (Vibrating Hammer Method)	BS 1377: Part 4: 1990 Clause 3.7
	Determination of soil density test	BS 1377: Part 2: 1990 Clause 7
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Determination of In-Situ Density	BS 1377: Part 9: 1990
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Toxicity characteristic leaching	USEPA 1311: 1992
	Phosphorus, P Sulphur, S	None
	SVOCs (Refer to Appendix 2 and 3 for	EPA Method 3510C: 1996
	Determination of Moisture Content	BS 1377:2:1990, Clause 3.2 MS 1056:2:2005, Clause 4.2
	Determination of Density	BS 1377:2:1990, Clause 7.2 MS 1056:2:2005, Clause 8.2
	Linear Shrinkage	BS 1377:2:1990, Clause 6.5 MS 1056:2:2005, Clause 7.5
	Determination of Particle Density	BS 1377:2:1990, Clause 8.3 MS 1056:2:2005, Clause 9.3
	Determination of Liquid Limit Using Casagrande Method	BS 1377:2:1990, Clause 4.5 & 4.6 MS 1056:2:2005, Clause 5.5 & 5.6
	Determination of Liquid Limit Using Cone Penetrometer Method	BS 1377:2:1990, Clause 4.3 & 4.4 MS 1056:2:2005, Clause 5.3 & 5.4
	Determination of the Plastic Limit	BS 1377:2:1990, Clause 5
	Maximum dry density / Moisture content relationship	BS 1377: Part 4: 1990
	Shear Strength Test without	None
	The laboratory Vane e	BS 1377: Part 7: 1990: Clause 3
	Field Density Test (Sand Replacement Method)	BS 1377: Part 9:1990 Clause 2.1
	Plastic limit test	Test instruction reference to BS
	Moisture content	BS1377-2, Clause 4.1
Solid Waste	None	None
	(SGT-HEM; Non-Polar Materials)	1998) & 1664 Revision A (February 1999)
	Total Petroleum	In House Method 0539 based on
	pH	USEPA 9045D, Revision 4 (2004)
	Flash Point	In House Method MY/STP/12 Based on ASTM D93-12
	Particle Size	In House Method MY/STP/344 Based on ASTM D1921-06
	Total Organic Carbon	In house Method MY/STP/364 Based on Walkley Black Method
	Toxicity Characteristic - leaching toxicity characteristic	In-house method, CL-TM-02-034, based on EPA SW 846, 1996
Spices, And Condiments	Fat	In-house Method 0511 based on Pearson-™s Chemical Analysis of

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Stationery Air Emission	Particulate Matter	MS 1596:2003 USEPA Method 5
	NOx	In-house method 585 based on Flue Gas Analyser
Surface E Equipment E Personnel Hand E	Swab Test Standard Plate Count	Swab Contact Method (FAO Manual of Food Quality Control 14/12 -" 1991)
Surface Water	Conductivity	APHA 2510 B, 2017
	Chlorate	Metrohm IC Application, Note No.
	None	Metrohm Technical Note
	Hydrocarbon	APHA 5520 F 2017
	Vanadium (V)	APHA 3120 B, 2017
	Free Carbon Dioxide (by calculation)	APHA 4500 COz D, 2017
	None	None
	None	APHA 2550 B, 2017
	Chromium, Cr	None
	VOCs	EPA Method 5030B: 1996; EPA
	None	None
	None	None
	None	(Membrane Filter Technique)
	None	None
Surface Water Swimming Pool/spa	Ammoniacal Nitrogen (as N)	APHA 4500-NHs3 C, 2017
Swimming Pool/spa	Total Solids	APHA 2540 B, 2017
Swimming Pool/spa Boiler Water	Phenol	APHA 5530 C, 2017
Swimming Pool/spa Ground Water Formation Water	pH Value	APHA 4500-H+ B, 2005 APHA 4500-H+ B, 2017
Their Products	None	Food (8th Edition)
	None	None
	None	None
Waste	Toxicity Characteristic Leaching	USEPA 1311-1992 (Metals Only)
	Method	None
	Inductively Coupled Plasma -"	None
	Optical Emission Spectrometry	None
	(ICP-OES)	None
	Arsenic	None
	Boron	None
	Barium	None
	Calcium	None
	Cadmium	None
	Cobalt	None
	Copper	None
	Chromium	None
	Iron	None
	Magnesium	None
	Manganese	None
	Nickel	None
	Lead	None
	Selenium	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Silver	None
	Zinc	None
	Metals Determination by Cold	None
	Vapour	None
	- Mercury	APHA 3112 B
Wastewater E	Potassium (K)	None
	None	134-A of Manual of Pesticides
	None	APHA 9215 B, 2017
Wastewater From Rubber And Palm Oil	Biochemical Oxygen Demand 3 days @ 30°C	DOE 2019, Alternative Method
Water	None	None
	Calcium Hardness as CaCO3,	APHA 3500-Ca B, 2017
	Magnesium (by Calculation Method)	APHA 3500-Mg B, 2017
	Nitrate	APHA E, 2017
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Aluminium	None
	None	None
	Organochlorine Pesticide	APHA 6630 B, Edition
	Ammoniacal Nitrogen	APHA F, 24" Edition
	Arsenic	APHA 3125 B, Edition
	Mercury	In-house method, SGS-TM-ENVI-003, based on APHA 3125 B
	2,4-dichlorophenoxyacetic acid (2,4-D)	In-house method, SGS-TM-02-045, based on Agilent Application Note 5991-5731 EN (LCMSMS)
	Heavy Metals by ICP-MS	None
	Endotoxin	Test for Bacterial Endotoxin, BP 2022
	pH	APHA 4500 H*B
	Oil & Grease	APHA 5520 B
	Color	APHA 2120 B
	Color	APHA 2120 F
	pH	APHA 4500 H* B
	Turbidity	APHA 2130 B
	Conductivity	APHA 2510 B
	None	None

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	Escherichia coli and coliform	ISO 9308-1: 2014 (E) / Enumeration
	Pseudomonas aeruginosa	ISO 16266:2006 (E) / Detection and
	Ammonium nitrogen	BS 6068: Section 2.7:1984 ISO 5664:1984
	Chemical Oxygen Demand	BS 6068: Section 2.34:1988
	Suspended solids	BS 2690-Part 120:1981
	Dissolved solids	BS 2690-Part 121:1981
	None	ASTM D 523-82
	COD	APHA 5220 D
	None	None
	Free Chlorine	APHA' 4500 -" CI G
	Count	(Pour Plate, Spread Plate and
	Anaerobes (Clostridia)	BS 6068-4:9: 1993
	Gross Alpha & Gross Beta	None
	Arsenic as As	None
	Antimony as Sb	None
	Aluminium as Al	None
	Beryllium as Be	None
	Cadmium as Cd	None
	Chromium as Cr	None
	Lead as Pb	None
	Silver as Ag	None
	Selenium as Se	None
	Thallium as TI	None
	Mercury as Hg	In-house Method LWI-MWE 037 based on APHA 3112 B by
	Mercury as Hg	Mercury Analyser
	Nitrate	In-house Method LWI-MWE 032 based on HACH Nitrate
	Nitrate	Test Comparator
	Sulfide	HACH Method 8131
	Chlorine, Free Residual	In-house Method LWI-MWE
	Chlorine, Free Residual	034 based on DPD-Palintest
	Chlorine, Free Residual	Test Comparator
	Total Chlorine	In-house Method LWI-MWE
	Total Chlorine	035 based on DPD-Palintest
	Total Chlorine	Test Comparator
	Colour (ADMI)	APHA 2120 F
	Heterotrophic Plate Count	None
	Pseudomonas aeruginosa	In-house Method LWI-MME (APHA) 007
	Pseudomonas aeruginosa	based on APHA 9213 E, 2020

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Escherichia coli and Coliform	Escherichia coli and Coliform Bacteria. Part 1: Membrane filtration
	Escherichia coli and Coliform	method
	Escherichia coli and Coliform	Method No: MOH (1)
	Escherichia coli and Coliform	ISO 29981 : 2010 (E), IDF 220 :
	Escherichia coli and Coliform	2010 (E) Milk Products -
	None	None
	None	None
	None	None
	None	None
Water E	Heterotrophic Plate Count	APHA 9215 B, 2005
Water E Marine Water E Wastewater E	E. coli Count by Membrane Filtration	In House Method 0610 based on APHA 9222 H, 2017
	Fecal Enterococci	APHA 9230 B, 2017
	Fecal Enterococci by Membrane Filtration	APHA 9230 C, 2017
	Thermotolerant (Fecal) Coliform by Membrane Filtration	In House Method 0609 based on APHA 9222G, 2017
	Total Coliform by Dual-Chromogenic Membrane Filtration	In House Method 0608 based on APHA 9222 J, 2017
	E. coli by Dual-Chromogenic Membrane Filtration	In House Method 0608 based on APHA 9222 J, 2017
	Thermo tolerant (Fecal) Coliform by Membrane Filtration	APHA 9222D, 2017

SCOPE OF TESTING : MICROBIOLOGY

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