Issue date: 8 February 2024
Valid until: 18 April 2029

NO: SAMM 188

LABORATORY LOCATION:
(PERMANENT LABORATORY)

EUROFINS NM LABORATORY SDN. BHD.
32, 66, 78 & 80, LORONG PERDA SELATAN 1
BANDAR PERDA
14000 BUKIT MERTAJAM
PULAU PINANG
MALAYSIA

FIELDS OF TESTING: **CHEMICAL, MICROBIOLOGY AND MECHANICAL**

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
Environmental Monitoring • Palm Oil Mill Effluents • Rubber Effluents	pH	APHA 4500-H+. B
	Chemical Oxygen Demand (COD)	DOE Standard Method (Reference & Alternative Method)
	Suspended Solids	DOE Standard Method (Reference Method)
	Total Solids	APHA 2540. B
	Ammoniacal Nitrogen	DOE Standard Method (Reference Method)
	Total Nitrogen	DOE Standard Method (Reference Method) DOE Standard Method (Alternative Method)
	Oil and Grease	DOE Standard Method (Reference Method)
	BOD at 30ºC for 3 days	DOE Standard Method (Reference & Alternative Method)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Water & Waste water • Industrial Effluents • Sewage	pH	APHA 4500-H+. B
	BOD at 20ºC for 5 days	APHA 5210. B APHA 4500-O. G
	Chemical Oxygen Demand (COD)	APHA 5220. B APHA 5220. C
	Total Suspended Solids Oil and Grease	APHA 2540. D APHA 5520. B
	Zinc Chromium (Total) Nickel Iron Copper Manganese Lead Cadmium Tin	APHA 3111. B
	Mercury Arsenic Chromium Hexavalent	APHA 3112. B APHA 3114. C APHA 3500-Cr. B
	Chromium Trivalent	APHA 3120. B- APHA 3500-Cr. B
	Boron	APHA 4500-B. C
	Color	APHA 2120. C APHA 2120. F

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • Water & Waste water • Industrial Effluents • Sewage	Fluoride	APHA 4500-F^-. C APHA 4500-F^-. B & D
	Formaldehyde	APHA 6252. B HACH 8110, Edition 8
	Free Chlorine	APHA 4500-Cl. B APHA 4500-Cl. G
	Total Chlorine	APHA 4500 -Cl. G
	Sulfide	APHA 4500-S^{2-}. D APHA 4500-S^{2-}. F
	Phenol	APHA 5530. B APHA 5530. D APHA 5530. C
	Nitrate	APHA 4500-NO_3^-. D
	Nitrite	APHA 4500-NO_2^-. B
	Cyanide	APHA 4500-CN-. C APHA 4500-CN-. E APHA 4500-CN^-. F
	Conductivity Turbidity Silica	APHA 2510. B APHA 2130. B APHA 4500-SiO_2. D

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • Water & Waste water • Industrial Effluents • Sewage	Temperature	APHA 2550. B (Part 1)
	Salinity	APHA 2520. B
	Sample preparation for Heavy Metal	APHA 3030. F APHA 3030. E
	Aluminium Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Potassium Selenium Silica Silver Sodium Strontium Thalium Vanadium Zinc	APHA 3120. B

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • Water & Waste water • Industrial Effluents • Sewage	Ammoniacal Nitrogen	APHA 4500-NH_3. B & C
	Ammoniacal Nitrogen (NH_3-N) (0.01 - 0.5mg/L)	In-house method EUBM.TWI.WA.46 based on HACH 8155, Edition 10
	Kjeldahl Nitrogen	APHA 4500.N_{org}. C
	Total Inorganic Nitrogen	In-house method EUBM.SOP.TM.WA.15 (Ammoniacal Nitrogen+ NO_2 + NO_3) based on APHA 4500-NH_3. B & C and APHA 4110. B
	Total Nitrogen	In-house method EUBM.SOP.TM.WA.17 (Total Kjeldahl Nitrogen+NO_2-N+NO_3-N) based on APHA 4500-N_{org}. C and APHA 4110. B
	Total Alkalinity (M-Alkalinity) P-Alkalinity	APHA 2320. B
• Mixed Liquor • Waste Water • Activated Sludge • Industrial Waste	Suspended Solids in mixed liquor (MLSS)	APHA 2540. D
	Fixed and Volatile Solids Ignited at 550 ˚C	APHA 2540. E
	Volatile Suspended Solids in mixed liquor (MLVSS)	APHA 2540. D APHA 2540. E

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • River Water	pH	APHA 4500-H^+. B
	Color	APHA 2120. C APHA 2120. F
	BOD	APHA 5210. B APHA 4500-O. G
	Chemical Oxygen Demand (COD)	APHA 5220. C
	Total Suspended Solid Oil and Grease	APHA 2540. D APHA 5520. B
	Ammonia Ammoniacal Nitrogen	HACH 8155
	TDS	APHA 2540. C
	Electrical conductivity Turbidity	APHA 2510. B APHA 2130. B
	Silica	EPA 200.7
	Total Hardness	APHA 2340. B
	Cyanide	APHA 4500 CN-. C APHA 4500 CN-. E
	Temperature Salinity	APHA 2550. B (PART 1) APHA 2520. B

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • River Water	Chromium Trivalent	In-house method EUBM.TWI.WA.18 based on APHA 3120. B and APHA 3500-Cr. B (By calculation)
	Chromium Hexavalent	APHA 3500-Cr. B
	Phenol	APHA 5530. B APHA 5530. C
	Free Chlorine	APHA 4500-Cl. G
	Fluoride Chloride Nitrite Nitrate Sulphate Phosphate	APHA 4110. B
	Nitrite as N (NO_2_N) Nitrate as N (NO_3_N) Sulphate as S (SO_4_S) Phosphate as P (PO_4_P)	APHA 4110. B, calculation

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • River Water	Arsenic Cadmium Chromium Lead Zinc Iron Aluminium Barium Copper Manganese Nickel Silver Selenium Boron Calcium Potassium Magnesium Sodium	APHA 3120. B
	Arsenic Cadmium Chromium Lead Zinc Iron Aluminium Barium Copper Manganese Mercury Nickel Silver Tin Selenium Boron Calcium Potassium Magnesium Sodium	EPA 200.7 (ICP-OES)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • River Water	Detergent (as MBAS)	APHA 5540. C
	DO	APHA 4500-O. G
	Sulfur	APHA 3030. E & APHA 3120. B EPA 200.7
	Phosphate	HACH 8048 APHA 4500-P : B & E
	Phosphorus	HACH 8048 APHA 4500-P : B & E
	Phenol	HACH 8047
	Cyanide	HACH 8027
	Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc	APHA 3125. B

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Marine Water	Color	APHA 2120. C APHA 2120. F
	Phenol	APHA 5530. B APHA 5530. C
	Cyanide	APHA 4500 CN-. C APHA 4500 CN-. E
	Total Suspended Solid Oil and Grease	APHA 2540. D APHA 5520. B
	Ammoniacal Nitrogen	HACH 8155
	Chromium Hexavalent	APHA 3500-Cr. B
	Nitrite	APHA 4500-NO_2-. B

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • Marine Water	Unionized Ammonia (NH_3)	In-house method EUBM.TWI.WA.58 based on FDEP code 00619
	Phosphate	HACH 8048 APHA 4500-P : B & E
	Phosphorus	HACH 8048 APHA 4500-P : B & E
	Cyanide	HACH 8027
	Nitrate (NO_3^-)	HACH 8192 In-house Method EUBM.TWI.WA.63 based on APHA 4500 NO_3. E
	Phenol	HACH 8047
	Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc	APHA 3125. B

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Drinking Water • Cooling Tower Water • Boiler Water • Ground Water	Total Dissolved Solids Acidity Alkalinity (as $CaCO_3$) Chloride Sulphate	APHA 2540. C APHA 2310. B APHA 2320. B APHA 4500-Cl-. B APHA 4500-SO_4^{2-}. E
	Total Hardness (as $CaCO_3$)	APHA 2340. B APHA 2340. C
	Phosphorus Total Organic Carbon (0.0-20mg/L)	APHA 4500-P. C HACH 10129, Edition 9
• Drinking Water • Cooling Tower Water • Boiler Water • Ground Water • Deionized Water • Treated Leachates Solution	**Anion** Flouride Chloride Nitrate Nitrite Sulphate Phosphate Bromide	APHA 4110. B (Ion Chromatography)
• Distilled Water • RO Water • RODI Water • Ultrapure Water (Grade 3 water for analytical use)	Residue after evaporation Oxidisable matter Conductivity UV Absorbance at 254nm	EN ISO 3696:1995 EN ISO 3696:1995 EN ISO 3696:1995 EN ISO 3696:1995

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Drinking Water • Water and Waste Water • Industrial Effluent • Sewage • Sludge • Solid and Semi Solid	Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Cerium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Mercury Molybdenum Nickel Phosphorus Potassium Selenium Silica Silver Sodium Strontium Thallium Tin Titanium Vanadium Yttrium Zinc	Sample pretreatment USEPA 3050B USEPA 3052 EPA 200.7 (ICP-OES)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Drinking Water • Ultrapure Water • Renal Dialysis Water • Tap Water • Domestic Water	Aluminium Chromium Manganese Nickel Copper Zinc Arsenic Selenium Silver Cadmium Antimony Lead Barium Iron Boron Mercury Sodium Magnesium	APHA 3125. B (ICP-MS)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Drinking water • River water • Marine water • Potable and domestic water	**Polycyclic Aromatic Hydrocarbons** Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(e)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	USEPA 3510C & USEPA 8270E
	Biocides (Total)	By Calculation of total determined organochlorine Pesticide and Herbicides
	Organophosphate Pesticide Chlorpyrifos	USEPA 3510C & USEPA 8270E
	Organochlorine Pesticides Aldrin Dieldrin DDT Chlordane Endosulfan Endosulfan I Endosulfan II Heptachlor Heptachlor epoxide Hexachlorobenzene Lindane Methoxychlor	USEPA 3510C & USEPA 8270E

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water (continued) • Drinking water • River water • Marine water • Potable and domestic water	**Organochlorine Pesticides** 4,4'-DDD 4,4'-DDE Endrin Endrin aldehyde Endrin ketone α-BHC β-BHC δ-BHC Endosulfan sulfate	USEPA 3510C & USEPA 8270E
	Styrene	Direct Injection & USEPA 8260 D
	Phenol	USEPA 3510C & USEPA 8270E
	Herbicides 2,4-Dichlorophenoxyacetic acid 2,4,5-Trichlorophenoxy acetic acid 2(2,4,5-Trichlorophenoxy) propionic acid	In-house method EUBM.SOP.TM.WA.21 based on USEPA 3510C & USEPA 8270E
• Drinking water • Potable and domestic water • Raw Water • River Water • Marine Water	Chloroform (CHCl3) Bromodichloromethane (BDCM) Dibromochloromethane (DBCM) Bromoform (CHBr3) Trichloroethane (TCA) Carbon tetrachloride (CCl4) Trichloroethene (TCE) Tetrachloroethene (PCE)	APHA 6232. B (2017)
	Carbon Chloroform Extract as Total Organic Carbon	In-house method EUBM.TWI.WA.66 based HACH 10129
	Mineral Oil	ISO 9377-2: 2000
	Total Petroleum Hydrocarbon (TPH), C10-C14 C15-C29 C30-C36 C37-C40	USEPA 8015C

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water • Drinking Water	**Polycyclic Aromatic Hydrocarbons** Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	EPA 550.1 (HPLC)
	Uranium	APHA 3125. B (2005)
	Total chlorine	APHA 4500-Cl. G (2005)
• Drinking water • Clean water • Dialysis water • Potable and Domestic water	Beryllium Calcium Cobalt Molybdenum Potassium Strontium Thallium Tin Uranium Vanadium	APHA 3125. B (2005)
• Drinking water • Raw water • Treated water • Potable and domestic water	MBAS	APHA 5540. C (2005)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Emissions from stationary sources • Stack Gas	Particulate Matter	USEPA 40 CFR 60, App. A, Method No. 5
	Sulfur Dioxide	USEPA 40 CFR 60, App. A, Method No. 6
	Nitrogen Oxide	USEPA 40 CFR 60, App. A, Method No. 7
	Sulfuric Acid Sulfur Dioxide	USEPA 40 CFR 60, App. A, Method No. 8
	Metals	USEPA 40 CFR 60, App. A, Method No. 29
	Hydrogen Halide Halogen	USEPA 40 CFR 60, App. A, Method No. 26A (Isokinetic method)
	Determination of concentration and mass flow of particulate matter in flue gas for stationary sources emissions	MS 1596: 2003 (Gravimetry)
• Ambient Air	Total Suspended Particulate Matter (TSP)	AS/NZS 3580.9.3:2003
	Sulfur Dioxide	ISC 704C ISC 720A
	Nitrogen Dioxide	ISC 406 (Bubble Method)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Pollutant in Air	Aluminium Arsenic Antimony Barium Beryllium Bismuth Boron Cadmium Calcium Chromium Cobalt Copper Gold Iron Lead Magnesium Manganese Molybdenum Nickel Palladium Phosphorus Platinum Potassium Selenium Sodium Strontium Tellurium Thallium Tin Titanium Vanadium Zinc	NIOSH 7303 (ICP-AES)
	Nuisance Dust (Total) Particulate not otherwise regulated respirable Alkaline Dust (as NaOH)	NIOSH 0500 NIOSH 0600 NIOSH 7401, Issue 2
	Formaldehyde	NIOSH 3500

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Pollutant Air	**Acid Mist:** Hydrogen Bromide, HBr Nitric Acid, HNO_3 Phosphoric Acid, H_3PO_4 Sulfuric Acid, H_2SO_4	OSHA ID-165 SG
	Hydrogen Chloride HCl	OSHA ID-174 SG
	Hydrofluoric Acid, HF Particulate Fluorides	NIOSH 7906
	Aluminium Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lanthanum Lead Lithium Magnesium Manganese Molybdenum Nickel Phosphorus Potassium Selenium Silver Strontium Tellurium Thallium Tin Titanium Tungsten Vanadium Yttrium Zinc Zirconium	NIOSH 7301

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Pollutant Air	IPA, Ethanol t-Butyl Alcohol	NIOSH 1400
	Cyclohexane Cyclohexene n-Decane n-Dodecane n-Heptane n-Hexane Methylcyclohexane n-Nonane n-Octane n-Pentane n-Undecane	NIOSH 1500
	Benzene Toluene Ethylbenzene o-Xylene m-Xylene p-Xylene Cumene p-Tert-Butyltoluene a-Methylstyrene b-Methylstyrene Styrene	NIOSH 1501

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solid and Semisolid Waste, Sediments, Sludge and Soils	**Sample pre-treatment for determination of:** Aluminium Arsenic Antimony Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Molybdenum Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	USEPA 3050B
Solid and Semi-Solid Waste	Toxicity Characteristic Leaching Procedure (TCLP)	USEPA 1311
TCLP Extraction	Arsenic Barium Cadmium Chromium Mercury Lead Selenium Silver	USEPA 6010C (ICP-OES)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solid and Semisolid Waste-Siliceous and Organically based matrices (e.g.: plastic, wood, rubber, paper, pigment, ink, paint, foam, hardener, glue, etc.)	**Sample pre-treatment for determination of:** Aluminium Antimony Arsenic Aurum Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Palladium Platinum Potassium Selenium Silver Sodium Strontium Tellurium Thallium Thorium Tin Titanium Vanadium Zinc	USEPA 3052

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solids such as soils, sludges, and wastes	Sample pretreatment for nonvolatile and semivolatile organic compound **Polybrominated Biphenyls (PBBs)** Monobromobiphenyl Dibromobiphenyl Tribromobiphenyl Tetrabromobiphenyl Pentabromobiphenyl Hexabromobiphenyl Heptabromobiphenyl Octabromobiphenyl Nonabromobiphenyl Decabromobiphenyl **Polybrominated Diphenyl Ethers (PBDEs)** Monobromodiphenyl Ether Dibromodiphenyl Ether Tribromodiphenyl Ether Tetrabromodiphenyl Ether Pentabromodiphenyl Ether Hexabromodiphenyl Ether Heptabromodiphenyl Ether Octabromodiphenyl Ether Nonabromodiphenyl Ether Decabromodiphenyl Ether And others	USEPA 3540C (Soxhlet Extraction)
Solid and Semisolid Waste	Oxygen combustion for Halogen and Sulfur content (F, Cl, Br, I and S)	BS EN 14582: 2016 (Calorimetric Bomb / Ion Chromatography)
Solid Waste and Virgin and used oils, fuels and related solid material	Sample preparation method for solid waste (F, Cl, Br, I and S)	USEPA 5050

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solid and Semisolid Waste, Sediments, Sludge and Soils - siliceous and organically based matrices (e.g.: plastic, wood, rubber, paper, pigment, ink, paint, foam, hardener, glue, etc.), ground water, other aqueous samples, EP extracts etc.	Aluminium Antimony Arsenic Aurum Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Mercury Molybdenum Nickel Palladium Phosphorus Platinum Potassium Selenium Silica Silver Sodium Strontium Tellurium Thallium Thorium Tin Titanium Vanadium Zinc	USEPA 6010C (ICP-OES)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solid Wastes (Polymer materials, electrical/ electronic components and toy component)	**Phthalate Esters** Di-n-hexyl Phthalate Di-isobutyl Phthalate Bis (2-ethylhexyl) Phthalate Dibutyl Phthalate Benzyl Butyl Phthalate Diisonocyl Phthalate Diisodecyl Phthalate Di-n-octyl Phthalate	In-house method EUBM.SOP.TM.IP.24 based on USEPA 3540.C (GC-FID) In-house method EUBM.SOP.TM.IP.25 based on USEPA 3540.C (GC-ECD) In-house method EUBM.SOP.TM.IP.26 based on USEPA 3540.C (GC-MS)
Solid, semisolid and liquid waste	Reactivity	USEPA 40 CFR Chapter 1-261.23 – Characteristic of reactivity
	Waste pH measured in water	USEPA 9045 D
	Soil pH measured in water	USEPA 9045 D
	Flash Point	In-house method EUBM.SOP.TM.SW.10 based on ASTM D 3828 -12a
	Range of particles size (>2mm)	ASTM D 422
	Range of particles size (<2mm)	In-house method EUBM.SOP.TM.SW.11 based on ASTM D 422
Solid	Water content (moisture)	ASTM D 2216

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Liquid waste	Water content	USEPA 9000
	Total Hydrocarbon (THC)	APHA 5520.F
	Flash Point	ASTM D 3828 - 12a
Waste material	Gross Calorific and Ash Value	ASTM D 5468
Liquid industrial	Specific Gravity	ASTM D 891 (Method B)
Engine coolant	Boiling Point	ASTM D 1120
Waste oil	Sediment Viscosity	ASTM D473 ASTM D445
Solid and semisolid waste (soil, slag, sludge)	TOC	In-house method EUBM.SOP.TM.SW.16 based on Walkley black

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Metal, plastic, wood, rubber, paper, pigment, ink, paint, foam, hardener, glue, etc.	**Sample pre-treatment for:** Hexavalent Chromium	USEPA 3060A
Metal, plastic, wood, rubber, paper, pigment, ink, paint, foam, hardener, glue, ground water and TCLP/EP extracts etc.	Hexavalent Chromium	USEPA 7196A
Colorless and colored Chromate coating on metallic sample	Hexavalent Chromium	BS EN ISO 3613: 2001
Plastic Material	Cadmium	BS EN1122: 2001 Method B: Flame AAS/ ICP-AES
Building Board	Formaldehyde Emission (Desiccator Method)	JIS A 1460:2001
Textile	Release formaldehyde (Vapour Absorption Method)	BS EN ISO 14184-2:1998
Fabric	Formaldehyde release (Sealed Jar Method)	AATCC 112-2008

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Rubber, Plastic materials, Lacquer and Coating	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Benzo(e)pyrene Benzo(j)fluoranthene	AfPS GS 2014:01
	Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Benzo(e)pyrene Benzo(j)fluoranthene	AfPS GS 2019:01
Children's Metal Jewellery	Lead	CPSC-CH-E1001-08.3 (Microwave Method. ASTM E1613: 2004)

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Children's Metal products (including children metal jewellery)	Antimony Arsenic Barium Cadmium Chromium Mercury Selenium Aluminium Boron Cobalt Copper Manganese Nickle Strontium Tin Zinc	In-house method EUBM.SOP.TM.IP.32 based on CPSC-CH-E1001-8.3
Non-metal children's products	Lead	CPSC-CH-E1002-08.3 (USEPA 3051A, 3052 ASTM E1613: 2004)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Paint and Certain Painted Products (Surface coatings)	Lead (to determine compliance with 16 CFR Part 1303)	CPSC-CH-E1003-09.1 (AOAC 974.02:2000, ASTM E1613: 2004)
Toys and children products	**Phthalates** Dibutyl phthalate Butyl benzyl phthalate Bis (2-ethylhexyl) phthalate Di-isononyl phthalate Diisobutyl Phthalate Di-Hexyl Phthalate Di-n-pentyl Phthalate Dicyclohexyl Phthalate	CPSC-CH-C1001-09.4
	Di-n-octyl phthalate Di-isodecyl phthalate	In-house method EUBM.SOP.TM.IP.15 based on CPSC-CH-C1001-09.4
Child Use and Care Articles- Cutlery and Feeding Utensils	**Phthalates** Dibutyl phthalate Butyl benzyl phthalate Bis (2-ethylhexyl) phthalate Di-n-octyl phthalate Di-isononyl phthalate Di-isodecyl phthalate	EN 14372: 2004 clause 6.3.2
Toys and children product	**Phthalate** Di-n-butyl phthalate Benzyl butyl phthalate Bis-(2-ethylhexyl) phthalate Di-n-octyl phthalate Di-iso-nonyl phthalate Di-iso-decyl phthalate	ISO 8124-6:2014 (Method A)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Toys & Toys material	**Migration of Certain Elements** Aluminium Antimony Arsenic Barium Boron Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Selenium Strontium Tin Zinc	EN 71: Part 3: 2019 ICP-OES
	Migration of Certain Elements Arsenic Antimony Barium Cadmium Chromium Lead Mercury Selenium	ASTM F963-17 (Section 8.3.2-8.3.5) ICP-OES
	Migration of Certain Elements Arsenic Antimony Barium Cadmium Chromium Lead Mercury Selenium	MS ISO 8124: Part 3: 2002 ICP-OES

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Paint and Similar Polymer Coating Material	Antimony Arsenic Barium Cadmium Chromium Lead Mercury Selenium	In-house method EUBM.SOP.TM.IP.27 based on AOAC 974.02 (ICP-OES)
Rubber	Myristic Acid (C-14) Pentadecylic Acid (C-15) Palmitic Acid (C-16) Margaric Acid (C-17) Stearic Acid (C-18) Oleic Acid (C-18:1) Linoleic Acid (C-18:2) Arachidic Acid (C-20)	In-house method EUBM.SOP.TM.IP.16 (GC-MS, GC-FID)
Raw Natural Rubber	Hydroxylamine Neutral Sulphate (HNS)	In-house method based on EUBM.SOP.TM.IP.36 In-house method based on EUBM.SOP.CTM.IP.26
Bleaching Earth	Arsenic Cadmium Lead Mercury	In-house method EUBM.SOP. TM.FD.30 based on AOAC 999.10

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Electrotechnical Product (Polymers, Metals and Electronics)	Disassembly, disjointment and mechanical sample preparation	IEC 62321-2, Edition 1.0 : 2013-06
	Cadmium Lead Mercury Total Chromium Total Bromine	IEC 62321-3-1, Edition 1.0 : 2013-06 (X-ray Fluorescence Spectrometry)
	Mercury	IEC 62321-4, 2013+AMD1:2017
	Polybrominated Biphenyls (PBB) Monobromobiphenyl Dibromobiphenyl Tribromobiphenyl Tetrabromobiphenyl Pentabromobiphenyl Hexabromobiphenyl Heptabromobiphenyl Octabromobiphenyl Nonabromobiphenyl Decabromobiphenyl **Polybrominated Diphenyl Ethers (PBDEs)** Monobromodiphenyl Ether Dibromodiphenyl Ether Tribromodiphenyl Ether Tetrabromodiphenyl Ether Pentabromodiphenyl Ether Hexabromodiphenyl Ether Heptabromodiphenyl Ether Octabromodiphenyl Ether Nonabromodiphenyl Ether Decabromodiphenyl Ether	IEC 62321-6, Edition 1.0 : 2015-06

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Electrotechnical Product (Polymers and Electronics)	Chromium Hexavalent	IEC 62321-7-2, Edition 1.0:2017
	Total Bromine	IEC 62321-3-2, Annex A, Edition 1.0 : 2013-06 (Oxygen bomb combustion)
	Cadmium Lead Chromium	IEC 62321-5, Edition 1.0 : 2013-06
Electrotechnical Product (Metal)	Cadmium Lead	IEC 62321-5, Edition 1.0 : 2013-06
	Presence of Hexavalent Chromium (IV)	IEC 62321-7-1, Edition 1.0 : 2015-09
Electrotechnical products (Polymers)	**Phthalates** Diisobutyl Phthalate Di-butyl phthalate Butyl benzyl phthalate Bis (2-ethylhexyl) phthalate Di-n-octyl phthalate Di-isononyl phthalate Di-iso-decyl phthalate	IEC 62321-8, Edition 1.0:2017
Surface of Circuit Board and Circuit Board	**Anion** Fluoride Chloride Sulphate Phosphate Bromide Nitrite Nitrate	IPC-Test Manual-650 Method Number: 2.3.28 Rev. B Ion chromatography

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food	**Metal Contaminants** Zinc Cadmium Lead Copper Iron Arsenic Antimony Selenium Mercury Tin	In-house method EUBM.SOP.TM.FD.01 (ICP-OES,ICP-MS) based on AOAC 999.10
Solid food	Sodium Potassium Calcium	In-house method EUBM.SOP.TM.FD.25 based on AOAC 984.27 AOAC Journal, vol. 92 No.pp 1484-1518 (35). 2009
Animal Feed	Ash	AOAC 923.03

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food Food contact material	Specific migration of heavy metals in 3% acetic acid, Aluminium Ammonium Antimony Arsenic Barium Cadmium Calcium Chromium Cobalt Copper Europium Gadolinium Iron Lanthanum Lead Lithium Magnesium Manganese Mercury Nickel Potassium Sodium Terbium Zinc	BS EN 13130-1: 2004
Food contact material (Olefin Polymers)	Maximum extractable fraction (expressed as percent by weight of the polymer) in n-hexane	21 CFR 177.1520
	Maximum soluble fraction (expressed as percent by weight of polymer) in xylene	21 CFR 177.1520
Food contact material (Rubber articles intended for repeated use)	Total extractive in distilled water for 7 and additional 2 hours	21 CFR 177.2600
	Total extractive in n-hexane for 7 and additional 2 hours	21 CFR 177.2600

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Materials and articles in contact with Foodstuffs (plastics)	**Overall migration into aqueous food simulants by total immersion.** Distilled water Acetic acid 3% Ethanol 10%	BS EN1186-3: 2002 (Method A)
	Overall migration into aqueous food simulants using a pouch Distilled water Acetic acid 3% Ethanol 10%	BS EN 1186- 7: 2002
	Overall migration into aqueous food simulants by article filling Distilled water Acetic acid 3% Ethanol 10%	BS EN 1186-9 : 2002
	Overall migration into olive oil by Total Immersion Overall migration into olive oil using Pouch Overall migration into olive oil by Article Filling	BS EN 1186-2:2002 BS EN 1186-6:2002 BS EN 1186-8:2002
Ceramic ware, glass-ceramic ware and glass dinnerware in contact with food	Release Cadmium and Lead	ISO 6486-1 :1999

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Polymer material (Plastic, rubber, polyolefin resins and other plastics)	Oxidation Induction Time (OIT)	MS ISO 11357-6: 2004 DSC
Crystalline and semi-crystalline plastic	Temperature, Enthalpy of Melting & Crystallization	MS ISO 11357-3: 2003 DSC
Polymer material	Mass loss Mass gain Residue Decomposition temperature	MS ISO 7111 : 1998 TGA
Liquid and Solid sample	General techniques for obtaining infrared spectra for Qualitative Analysis	ASTM E 1252-1998 (FTIR)
	Identification of functional groups of organic and inorganic compound	In-house method EUBM.SOP.TM.FA.02 based on ASTM E1252-1998 (FTIR)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Calcium Carbonate	Assay of Calcium Carbonate Arsenic Barium Iron Lead Limit of fluoride Limit of Magnesium & Alkali Salts Mercury Loss on drying Acid insoluble Substances	USP 41
	Heavy metals	USP 37 <231>
	Chloride	Ph. Eur Monograph 0014
Calcium Hydroxide	Assay on Calcium Hydroxide Arsenic Carbonate Lead Magnesium and Alkali Salts Acid insoluble Substances	FCC 10
	Fluoride Cadmium Heavy metal	FCC 10, Appendix IIIB, Method III FCC 10, Appendix IIIB, Method III USP 37 Method <231>
Traditional medicine	Arsenic Lead Cadmium Mercury	In-house method EUBM.SOP.TM.DG.04 based AOAC 999.10
Cosmetics products	Arsenic Lead Cadmium Mercury	In-house method EUBM.SOP.TM.DG.03. based ACM THA 05

SCOPE OF TESTING: CHEMICAL

Note:

APHA	:	Standard Method for the Examination of Water and Waste Water: 21st Ed.: 2005
DOE	:	Department of Environment. Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent, 3rd Ed.: 2011
USEPA	:	United State Environmental Protection Agency
NIOSH	:	NIOSH Manual of Analytical Method, 4th Ed.: 1994. Published by National Institute of Occupation Safety and Health, USA
AOAC	:	Association of Official Analytical Chemists.19th Ed.: 2012
CPSC	:	Consumer Product Safety Commission
ASTM	:	American Society for Testing and Materials
IEC	:	International Electrotechnical Commission. 1st Ed.:2008
ISC	:	Intersociety Committee, 3rd Ed.: 1998
MOH	:	Ministry of Health, Malaysia
FCC	:	Food Chemical Codex, 8th Ed.:2012 by Authority of United States Pharmacopeial Convention
USP	:	U.S. Pharmacopeial, 37th Ed.: 2014
AATCC	:	American Association of Textile Chemist and Colorists
AfPS GS	:	German Commission of Product Safety
BS	:	British Standard
EN	:	European Standard
IEC	:	International Electrical Commission. Edition 1.0 : 2013-06 & 2015-06
IEC	:	International Electrical Commission. Edition 1.0:2017
ISO	:	International Organisation for Standardisation
JIS	:	Japanese Industrial Standard
Ph. Eur.	:	European Phamacopoeia
EPA	:	Environment Protection Agency
ACM	:	Asean Cosmetic Method
FDEP	:	Florida Department of Environmental Protection Chemistry Laboratory Methods Manual, Tallahassee; Revision 2
OSHA	:	Occupational Safety Health Administration

SCOPE OF TESTING: CHEMICAL

Signatories:

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SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water samples (e.g.: mineral & drinking water, recreational water, cooling tower water, potable water and effluent)	Heterotrophic Plate Count/ Standard Plate Count	APHA 9215. B APHA 9215. C APHA 9215. D
	Total Coliform	APHA 9221. B APHA 9222. B
	Fecal Coliform	APHA 9221. E APHA 9222. D
	Salmonella *Pseudomonas aeruginosa* *Legionella*	APHA 9260. B APHA 9213. E APHA 9260. J
	Legionella pneumophila SG1 *Legionella pneumophila SG2-14* *Legionella species*	AS/NZS 3896: 2008
	Escherichia coli	APHA 9221. F APHA 9222.G
• Marine water • Reacreational water	Enterococci Count	APHA 9230C
• Drinking water • Mineral water • Potable water	Fecal Streptococci *Clostridium perfringens* Sulphite reducing anaerobes	APHA 9230.C HPA NSM W5 Issue 3 ISO 6461-2:1986

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
All type of food and food related samples	Aerobic Plate Count	FDA-BAM Chapter 3
	Yeast & Mould Count	FDA-BAM Chapter 18
	Coliform	FDA-BAM Chapter 4
	Fecal Coliform	FDA-BAM Chapter 4
	Escherichia coli	FDA-BAM Chapter 4
	Staphylococcus aureus	FDA-BAM Chapter 12
	Salmonella	FDA-BAM Chapter 5
• Pharmaceutical product • Cosmetics • Toiletries Product • Traditional Medicine	Total Viable Aerobic Count (Bacteria & Fungi)	BP 2013 Appendix XVIB
	Total Aerobic Microbial Count	
	Total Yeast and Mould Count	
	Bile-tolerant Gram –ve bacteria (Enterobacteriaceae)	
	Escherichia coli	
	Salmonella	
	Pseudomonas aeruginosa	
	Staphylococcus aureus	
	Candida albicans	
	Burkholderia cepacia Detection	In-house method EUBM.SOP.TM.MB.DG.08 based on Journal of AOAC

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Swab test on: • Surface • Equipment • Personnel hand	**Swab Tests:** Total Bacteria Count Total Yeast and Mould Count Coliform Count *Escherichia coli* Count	In-house method EUBM.SOP.TM.MB.EM.01 based on Compendium of Methods for the Microbiological Examination of Foods, 4th Edition (2001)
	Detection of *Salmonella spp.*	In-house method EUBM.SOP.TM.MB.EM.07 based on FDA-BAM Chapter 5
	Enterobacteriaceae Count	Compendium of Methods for the Microbiological Examination of Foods, 4th Ed, 2001
	Staphylococcus aureus Count	Compendium of Methods for the Microbiological Examination of Foods, 4th Ed, 2001
	Listeria spp and *Listeria monocytogenes* Detection	AOAC 997.03 :2012
Air	**Sedimentation Plate Test:** Total Bacteria Count Total Yeast & Mold Count/ Fungi Count	In-house method EUBM.SOP.TM.MB.EM.02 based on Compendium of Methods for the Microbiological Examination of Foods, 4th Edition (2001)
	Bioaerosol Test: Total Bacteria Count Total Yeast & Mold Count/ Fungi Count	In-house method EUBM.SOP.TM.MB.EM.03 based on NIOSH method 0800 4th Edition.

Issue date: 8 February 2024
Valid until: 18 April 2029

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SCOPE OF TESTING: MICROBIOLOGY

Note:

APHA	:	Standard Method for the Examination of Water and Waste Water: 21st Ed.: 2005
FDA-BAM	:	Food and Drugs Administration-Bacteriological Analytical Manual, 8th Ed.:1998
BP	:	British Pharmacopoeia 2013
AOAC	:	Association of Official Analytical Chemists.19th Ed.: 2012
HPA	:	Health Protection Agency
ISO	:	International Organisation for Standardisation
PTM	:	Performance Tested Methods

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5.	**Lim Wei Yee**	**MJMM0712**

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Emissions from stationary sources • Stack Gas	Particulate Matter	USEPA 40 CFR 60, App. A, Method No. 5
	Sulfur Dioxide	USEPA 40 CFR 60, App. A, Method No. 6
	Nitrogen Oxide	USEPA 40 CFR 60, App. A, Method No. 7
	Sulfuric Acid Sulfur Dioxide	USEPA 40 CFR 60, App. A, Method No. 8
	Metals Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Mercury Nickel Phosphorus Selenium Silver Thalium Zinc	USEPA 40 CFR 60, App. A, Method No. 29

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring • Emissions from stationary sources • Stack Gas	**Hydrogen Halide** Hydrogen Chloride, HCl Hydrogen Bromide, HBr Hydrogen Fluoride, HF **Halogen** Chlorine, Cl_2 Bromine, Br_2	USEPA 40 CFR 60, App. A, Method No. 26A (Isokinetic Method)
	Determination of concentration and mass flow of particulate matter in flue gas for stationary sources emissions	MS 1596: 2003
	Dark Smoke	BS 2742:2009 Ringelmann and miniature Smoke charts
	Oxygen (O_2) Carbon Dioxide (CO_2)	USEPA 40 CFR 60, App. A, Method 3A
	Sulfur Dioxide (SO_2)	USEPA 40 CFR 60, App. A, Method 6C
	Nitrogen Oxide (NO_x)	USEPA 40 CFR 60, App. A, Method 7E
	Carbon Monoxide (CO)	USEPA 40 CFR 60, App. A, Method 10
	Total Organic compounds (NMVOC)	USEPA 40 CFR 60, App. A, Method 25A

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Hygiene Pollutant in Air	Aluminium Arsenic Antimony Barium Beryllium Bismuth Boron Cadmium Calcium Chromium Cobalt Copper Gold Iron Lead Magnesium Manganese Molybdenum Nickel Palladium Phosphorus Platinum Potassium Selenium Sodium Strontium Tellurium Thallium Tin Titanium Vanadium Zinc	NIOSH 7303
	Alkaline Dust (as NaOH)	NIOSH 7401, Issue 2
	Formaldehyde	NIOSH 3500

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Hygiene Pollutant in Air	Nuisance Dust (Total) Particulate not otherwise regulated respirable	NIOSH 0500 NIOSH 0600
	Acid Mist Hydrogen Bromide, HBr Nitric Acid, HNO_3 Phosphoric Acid, H_3PO_4 Sulfuric Acid, H_2SO_4	OSHA ID-165 SG
	Hydrogen Chloride, HCl	OSHA ID-174 SG
	Hydrofluoric Acid, HF Particulate Fluorides	NIOSH 7906

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Hygiene		
Pollutant in Air	Aluminium Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lanthanum Lead Lithium Magnesium Manganese Molybdenum Nickel Phosphorus Potassium Selenium Silver Strontium Tellurium Thallium Tin Titanium Tungsten Vanadium Yttrium Zinc Zirconium	NIOSH 7301

Issue date: 8 February 2024
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SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Hygiene Pollutant in Air	IPA, Ethanol t-Butyl Alcohol	NIOSH 1400
	Cyclohexane Cyclohexene n-Decane n-Dodecane n-Heptane n-Hexane Methylcyclohexane n-Nonane n-Octane n-Pentane n-Undecane	NIOSH 1500
	Benzene Toluene Ethylbenzene o-Xylene m-Xylene p-Xylene Cumene p-Tert-Butyltoluene a-Methylstyrene b-Methylstyrene Styrene	NIOSH 1501

SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Materials/ Products Tested	**Type of Test/ Properties Measured/ Range of Measurement**	**Standard Test Methods/ Equipment/Techniques**
Environmental Monitoring Ambient Air	Sulfur Dioxide	ISC 704C ISC 720A
	Nitrogen Dioxide	ISC 406 (Bubble Method)
	Total Suspended Particulate (TSP) Particulate Matter 10 µm (PM10) Particulate Matter 2.5 µm (PM2.5)	In-house method EUBM.SOP.TM.FW.AIR.01 based on Environmental DuskTrak Aerosol Monitor Model 8540, 8543, Operation and Service Manual
• Water & Waste water • Industrial Effluents • Sewage	pH Value (In-situ) Temperature (In-situ)	APHA 4500-H+.B APHA 2550.B (Part 1)
Clear Effluent	Free Chlorine (In-situ)	In-house method EUBM.SOP.TM.FW.WA.04 based on APHA 4500-Cl.G

Issue date: 8 February 2024
Valid until: 18 April 2029

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SCOPE OF TESTING: CHEMICAL

SITE: CATEGORY I

Note:

USEPA	:	United State Environmental Protection Agency
NIOSH	:	NIOSH Manual of Analytical Method, 4th Ed.: 1994. Published by National Institute of Occupation Safety and Health, USA
ISC	:	Intersociety Committee, 3rd Ed.:1998
APHA	:	Standard Method for the Examination of Water and Waste Water. 21st Ed.:2005
OSHA	:	Occupational Safety Health Administration

Signatories:

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Issue date: 8 February 2024
Valid until: 18 April 2029

NO: SAMM 188

SCOPE OF TESTING: MECHANICAL

SITE: CATEGORY I

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring Acoustics Noise	Measurement and assessment of Environmental Noise	ISO 1996-1 : 2003
	Determination of sound pressure levels	ISO 1996-2: 2017

Note:

ISO : International Standard Organization

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