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LABORATORY LOCATION/ CENTRAL OFFICE: 	Eralab Sdn. Bhd. No. 21, Block C, Jalan PJU 1A/3, Taipan Damansara 2 Parcel 1, Ara Damansara , 46301, SELANGOR MALAYSIA
ACCREDITED SINCE :	09 JUNE 2006
FIELD(S) OF TESTING:	CHEMICAL MICROBIOLOGICAL
SITE:	
1 . SITE LABORATORY(HQ) :	CATEGORY I
FIELD(S) OF TESTING :	CHEMICAL,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).

CENTRAL LOCATION:	Eralab Sdn. Bhd. No. 21, Block C, Jalan PJU 1A/3, Taipan Damansara 2 Parcel 1, Ara Damansara , 46301, Selangor
FIELD(S) OF TESTING :	CHEMICAL, MICROBIOLOGICAL

SCOPE OF TESTING : CHEMICAL

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Environmental Monitoring Sewage Water, Industrial Wastewater, Effluent & Others (sea Water)	Temperature	APHA 2550B
	pH	APHA 4500H+-B
	Dissolved Oxygen	APHA 4500O-G
	Conductivity	APHA 2510B
	Salinity	In-house method Ref ERA/TMPM-I (W009) based on Manufacturer's Method (YSI)
	Residual Chlorine	In-house method Ref ERA/TMPM-I (W004) based on Manufacturer's Method (Lovibond/ Palintest)
	Total Solids	APHA 2540B
	Total Dissolved Solids	APHA 2540C
	Total Suspended Solids	APHA 2540D
	Turbidity	APHA 2130B
	Alkalinity	APHA 2320B
	Acidity	APHA 2310B
	Color	APHA 2120B
	Hardness	APHA 2340C
	Biochemical Oxygen Demand	APHA 5210B
	Chemical Oxygen Demand	APHA 5220C
	Oil and Grease	APHA 5520 B
	Total Kjeldahl Nitrogen	APHA 4500Norg-B, APHA 4500 - NH3C
	Ammoniacal Nitrogen	APHA 4500-NH3C
	Organic Nitrogen	APHA 4500Norg-B
	Phenols	HACH METHOD 8047
	Surfactant, Anionic	HACH METHOD 8028

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Silica	HACH METHOD 8185
	Boron	HACH METHOD 8015
	Chloride	HACH METHOD 8113
	Cyanide	HACH METHOD 8027
	Fluoride	HACH METHOD 8029
	Nitrate	HACH METHOD 8171
	Nitrite	HACH METHOD 8507
	Sulfate	HACH METHOD 8051
	Sulfide	HACH METHOD 8131
	Orthophosphate	HACH METHOD 8048
	Total Phosphorus	HACH METHOD 8190
	Chromium Hexavalent (Cr VI)	HACH METHOD 8023
	Chromium Trivalent (Cr III)	In-house method Ref ERA/TMPMI(W046)
	Color	~<-<-<-<-<-<
	Formaldehyde	APHA 2120F
		HACH MTD 8110
	Calcium (Ca) Chromium (Cr) Copper (Cu) Iron (Fe) Magnesium (Mg) Manganese (Mn) Nickel (Ni) Potassium (K) Sodium (Na) Silver (Ag) Zinc (Zn)	APHA 3111B
	Cadmium (Cd) Lead (Pb) Aluminium (Al) Tin (Sn)	APHA 3113B

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Arsenic (As)	APHA 3114C
	Selenium (Se)	
	Mercury (Hg)	APHA 3112B
	Sample Preparation for Metals Analysis	APHA 3030B, APHA 3030E, F, G, H & I
Environmental Monitoring Ambient Air	Total Suspended Particulates (TSP)	APHA IC (11101-01-70T)(74R)
	PM10	APHA IC (11101-01-70T)(74R)
	Nitrogen Dioxide (NO2)	APHA IC (42602-01-68T)(74R)
	Sulfur Dioxide (SO2)	APHA IC (424401-01-69T)
	Carbon Monoxide (CO)	APHA IC (42101-07-74T)
	Dust:	
	Particulate Matter as PM2.5	In-house method TMPM 1-A006 & TMPM II-A005 based on 40 CFR part 50, Appendix J & L
	Particulate Matter as PM10	
	Total Suspended Particulate (TSP)	
	Gases:	
	Ozone	In-house method TMPM II-A006 based on Manufacturer's Method
		APHA 3120B
Environmental Monitoring Industrial Effluent, Leachate & Sewage Water	Metals:	
	Aluminium (Al)	
	Antimony (Sb)	
	Arsenic (As)	
	Barium (Ba)	
	Beryllium (Be)	
	Boron (B)	
	Calcium (Ca)	
	Cadmium (Cd)	
	Cobalt (Co)	
	Copper (Cu)	
	Iron (Fe)	
	Lead (Pb)	
	Lithium (Li)	
	Magnesium (Mg)	
	Manganese (Mn)	
	Molybdenum (Mo)	
	Nickel (Ni)	
	Silica (Si)	
	Silver (Ag)	
	Selenium (Se)	
	Sodium (Na)	
	Strontium (Sr)	
	Thallium (Tl)	
	Vanadium (V)	
	Zinc (Zn)	
	Chromium (Cr)	
	Organics:	
	Phenols	APHA 5530 B & C
	Total Hydrocarbon	APHA 5520 F

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Inorganics: Sulfide	APHA 4500 S2- D
	Metals: Tin (Sn) Potassium (K) Phosphorus (P) Chromium Hexavalent (Cr VI)	APHA 3120 B APHA 3120 B APHA 3120 B APHA 3500 Cr B
	Solids: Fixed and Volatile Solids Ignited at 550°C	APHA 2540 E
	Inorganics: Fluoride (F?) Bromide (Br?) Chloride (Cl?) Nitrate (NO ₃ ?) Nitrite (NO ₂ ?) Phosphate (PO ₄ ²⁻ ?) Sulphate (SO ₄ ²⁻ ?)	APHA 4110B
	Organics: Total Organic Carbon Total Petroleum Hydrocarbon	APHA 5310B USEPA 8015C
Liquid Sample (stack Emission)	Inorganic Acids: Hydrogen Chloride (HCl) Hydrogen Fluoride (HF) Hydrogen Bromide (HBr)	In-house method TPM I- E001 (inorganics) based on USEPA 26A (analysis only)
Water Surface Water, Groundwater, Mineral Water, Processed Water, Recycled Water, Potable & Domestic Water	Temperature	APHA 2550B
	pH	APHA 4500H ⁺ -B
	Dissolved Oxygen	APHA 4500O-G
	Conductivity	APHA 2510B
	Salinity	In-house method Ref ERA/TPM-I (W009) based on Manufacturer's Method (YSI)
	Turbidity	APHA 2130B
	Residual Chlorine	In-house method Ref ERA/TPM-I (W004) based on Manufacturer's Method (Lovibond/ Palintest)
	Total Solids	APHA 2540B
	Total Dissolved Solids	APHA 2540C
	Total Suspended Solids	APHA 2540D

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Turbidity	APHA 2130B
	Alkalinity	APHA 2320B
	Acidity	APHA 2310B
	Color	APHA 2120B
	Hardness	APHA 2340C
	Biochemical Oxygen Demand	APHA 5210B
	Chemical Oxygen Demand	APHA 5220C
	Oil and Grease	APHA 5520 B
	Total Kjeldahl Nitrogen	APHA 4500N _{org} -B, APHA 4500 - NH ₃ C
	Ammoniacal Nitrogen	APHA 4500-NH ₃ C
	Organic Nitrogen	APHA 4500N _{org} -B
	Phenols	HACH METHOD 8047

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Surfactant, Anionic	HACH METHOD 8028
	Silica	HACH METHOD 8185
	Boron	HACH METHOD 8015
	Chloride	HACH METHOD 8113
	Cyanide	HACH METHOD 8027
	Fluoride	HACH METHOD 8029
	Nitrate	HACH METHOD 8171
	Nitrite	HACH METHOD 8507
	Sulfate	HACH METHOD 8051
	Sulfide	HACH METHOD 8131
	Orthophosphate	HACH METHOD 8048
	Total Phosphorus	HACH METHOD 8190
	Chromium Hexavalent (Cr VI)	HACH METHOD 8023
	Chromium Trivalent (Cr III)	In-house method Ref ERA/TMPMI(W024a) based on APHA 3111B
	Calcium (Ca) Chromium (Cr) Copper (Cu) Iron (Fe) Magnesium (Mg) Manganese (Mn) Nickel (Ni) Potassium (K) Sodium (Na) Silver (Ag) Zinc (Zn)	APHA 3111B
	Cadmium (Cd) Lead (Pb) Aluminium (Al) Tin (Sn)	APHA 3113B
	Arsenic (As) Selenium (Se)	APHA 3114C
	Mercury (Hg)	APHA 3112B

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Sample Preparation for Metals Analysis	APHA 3030B, APHA 3030E, F, G, H & I
	Organics:	
	Organochlorine Pesticides & Herbicides (List of compounds as in Appendix 1)	USEPA 8081 B GC-ECD USEPA 3510 C Liquid-liquid Extraction
	Volatile Organic Compounds (VOCs) (Benzene, Ethylbenzene, Xylene)	In-House Method ERATTMPM 1-W055 Purge & Trap- GCMS-MS based on USEPA 5030C & USEPA 8260 D APHA 5530 B & C APHA 5520 B & F
	Phenols	
	Total Hydrocarbon	
	Metals: Tin (Sn) Potassium (K) Phosphorus (P) Chromium Hexavalent (Cr VI)	APHA 3120 B APHA 3120 B APHA 3120 B APHA 3500 Cr B
	Inorganics: Sulfide Surfactant	APHA 4500 S2- D APHA 5540 C

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Water Distilled Demineralized, Groundwater, Industrial / Cooling Purposes, Mineral Water, Potable And Domestic, Processes Water, Recycled Water, Reverse Osmosis Water, Saline Water, Steam Raising / Boiler, Surface Water, Swimming Pool Water & Marine Water	Metals: Aluminium (Al) Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Boron (B) Calcium (Ca) Cadmium (Cd) Cobalt (Co) Copper (Cu) Iron (Fe) Lead (Pb) Lithium (Li) Magnesium (Mg) Manganese (Mn) Molybdenum (Mo) Nickel (Ni) Silica (Si) Silver (Ag) Selenium (Se) Sodium (Na) Strontium (Sr) Thallium (Tl) Vanadium (V) Zinc (Zn) Chromium (Cr)	APHA 3120B
	Inorganics: Fluoride (F?) Bromide (Br?) Chloride (Cl?) Nitrate (NO ₃ ?) Nitrite (NO ₂ ?) Phosphate (PO ₄ ²⁻ ?) Sulphate (SO ₄ ²⁻ ?)	APHA 4110B
Water Distilled Water, Groundwater, Mineral Water, Potable And Domestic, Processed Water, Surface Water & Marine Water	Organics: Total Organic Carbon Total Petroleum Hydrocarbon	APHA 5310B USEPA 8015C
Water Distilled Water, Groundwater, Mineral Water, Potable And Domestic & Processed Water	Trihalomethanes - Bromoform - Chloroform - Dibromochloromethane - Dichlorobromomethane	USEPA 8260C

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Workplace Environmental & Hazards Industrial Hygiene	Metal: Aluminium (Al) Antimony (Sb) Arsenic (As) Beryllium (Be) Cadmium (Cd) Chromium (Cr) Cobalt (Co) Copper (Cu) Iron (Fe) Magnesium (Mg) Molybdenum (Mo) Nickel (Ni) Vanadium (V) Zinc (Zn)	NMAM 7303
	Lead (Pb)	NMAM 7300 NMAM 7303 NMAM 7082
	Mercury (Hg) Crystalline Silica (INOPERATIVE)	NMAM 6009 NMAM 7602 (INOPERATIVE)
	Inorganic Acids: Hydrofluoric Acid (HF) Hydrochloric Acid (HCl) Phosphoric Acid (H ₃ PO ₄) Hydrobromic Acid (HBr) Nitric Acid (HNO ₃) Sulfuric Acid (H ₂ SO ₄)	In-house method TPM I-IH005 based on NMAM 7903
	Organics: Benzene Toluene Ethylbenzene Xylene	NMAM 1501
	Ethylene Dichloride (EDC) Vinyl Chloride (VCM) Oil Mist Total Dust Respirable Dust (INOPERATIVE)	NMAM 1003 In-house IH (009) NMAM 5026 NMAM 0500 NMAM 0600 (INOPERATIVE)
	Soil, Sludge, Sediment	APHA 2540 G
	Solid: Total, Fixed and Volatile Solids Organics: Total Organic Carbon (TOC) n-Hexane Extractable Material (HEM) Total Hydrocarbon	In-House Method ERA/TPM I-5007 based on Shimadzu SSM-5000 A USEPA 9071 B APHA 5520 E & F

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Petroleum Product, Lubricant, Additives	Water Content in Liquid	ASTM D6304-20
	Water Content in Gas	ISO 10101-3
	Density, Relative Density (Specific Gravity), API Gravity	ASTM D7777-13(2018)e1
	Kinematic Viscosity	In-House Method TMPM WI _1015 based on ISO 3219
	Dinamic Viscosity	In-House Method TMPM WI _ 1015 based on ISO 3219
	Yield Stress	In-House Method TMPM WI _1015 based on ISO 3219
Gases	Nitrogen Carbon Dioxide Methane Ethane Propane Isobutane N-butane Isopentane N-pentane N-Hexane	GPA 2286

SCOPE OF TESTING : MICROBIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Water Dist Distilled Water, Mineral Water, Potable And Domestic, Processed Water, Surface Water & Groundwater	Total Coliform Fecal Coliform E. Coli Heterothropic Plate Count	APHA 9222 B APHA 9222 D USEPA 1603 APHA 9215 B
Water Distilled Water, Mineral Water, Potable And Domestic, Marine Water, Surface Water & Ground Water	Total Coliform Fecal Coliform E. coli	APHA 9221 B (MPN Method) APHA 9221 E (MPN Method) APHA 9221 F (MPN Method)
Water Distilled Water, Mineral Water, Potable And Domestic	Fecal Streptococci/ Enterococci Pseudomonas aeruginosa Clostridium perfringens	APHA 9230 C APHA 9213 E HPA 2004, NSM W5 (03)

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Workplace Environmental & Hazards Indoor Air	Total Fungi Total Bacteria	NMAM 0800

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SITE LOCATION (HQ)	1. CATEGORY I
FIELD(S) OF TESTING :	CHEMICAL,MECHANICAL

SCOPE OF TESTING : MECHANICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Noise	Test parameter: LAeq Lmax Lmin L10 L50 L90 Measuring range: 0-114 dBA	In-house method ERA/TMPM IIN001 based on Sound Level Meter LXT1 & G4 and ISO 1996-1
Vibration	Test parameter: Peak Particle Velocity, ppv (mm/s) Frequency, Hertz (Hz)	In-house method ERA/TMPM IIV001 based on Micromate manufacturer's method;- i) ISO 2631-1 ii) DIN 4150-Part 3

SCOPE OF TESTING : CHEMICAL

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

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Water Surface Water, Ground Water, Mineral Water, Processed Water, Recycled Water, Potable And Domestic Wate	Temperature	APHA 2550B
	pH	APHA 4500H ⁺ -B
	Dissolved Oxygen	APHA 4500O-G
	Conductivity	APHA 2510B
	Salinity	In-house method Ref ERA/TMPM-I (W009) based on Manufacturer's Method (YSI)
	Turbidity	APHA 2130B
	Residual Chlorine	In-house method Ref ERA/TMPM-I (W004) based on Manufacturer's Method (Lovibond/ Palintest)
	Color	APHA 2120B
Environmental Monitoring Ambient Air	Nitrogen Dioxide (NO ₂) Sulfur Dioxide (SO ₂) Carbon Monoxide (CO)	APHA IC (42602-01-68T)(74R) APHA IC (42401-01-69T) APHA IC (42101-07-74T)
Environmental Monitoring Sewage Water, Industrial Wastewater, Others (sea Water)	Temperature	APHA 2550B
	pH	APHA 4500H ⁺ -B
	Dissolved Oxygen	APHA 4500O-G
	Conductivity	APHA 2510B
	Salinity	In-house method Ref ERA/TMPM-I (W009) based on Manufacturer's Method (YSI)
	Turbidity	APHA 2130B
	Residual Chlorine	In-house method Ref ERA/TMPM-I (W004) based on Manufacturer's Method (Lovibond/ Palintest)

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Environmental Monitoring Stationary Source Emission	Gases:	Inhouse Mtd. E-G-001(Flue Gases) Based on Analyzer Kane 975
	Oxygen (O ₂)	
	Carbon Monoxide (CO)	
	Carbon Dioxide (CO ₂)	
	Nitric Oxide (NO)	
	Nitrogen Dioxide (NO ₂)	
	Sulfur Dioxide (H ₂ S)	
	Hydrogen Sulfide (H ₂ S)	
	Particulate Matter	MS 1596 : 2003 USEPA 5
	Dark Smoke	BS 2742: 2009 (Ringelmann Smoke Chart)

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