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Standard Tost Mothods /

LABORATORY LOCATION/	Makmal Kualiti Air, NAHRIM
CENTRAL OFFICE:	Lot 5377, Jalan Putra Permai 43300 Seri Kembangan, Selangor,
	43300,
	SELANGOR
	MALAYSIA
ACCREDITED SINCE :	18 MARCH 2025
FIELD(S) OF TESTING:	CHEMICAL
	MICROBIOLOGICAL

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:	Makmal Kualiti Air, NAHRIM Lot 5377, Jalan Putra Permai 43300 Seri Kembangan, Selangor , 43300,
FIELD(S) OF TESTING:	Selangor CHEMICAL, MICROBIOLOGICAL

SCOPE OF TESTING: CHEMICAL

Material / Product Tosted

Material / Product Tested	Measured / Range Of	Equipment / Techniques
	Measurement	Equipment / recliniques
Environmental Monitoring	рН	APHA 4500-H ⁺ B
Water And Wastewater	Turbidity	APHA 2130 B
	Chemical Oxygen Demand (COD)	In-house test method MKA TM01
		based on HACH Method 8000,
		12th Edition, 2021
	Mercury, Hg	In-house test method MKA TM02
		based on APHA 3112 B

Type Of Test / Properties

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Material / Product Tested	Type Of Test / Properties Measured / Range Of	Standard Test Methods / Equipment / Techniques
	Measurement	
	Metals	APHA 3030 F and APHA 3120 B
	Aluminium, Al	
	Chromium, Cr	
	Copper, Cu	
	Iron, Fe	
	Lead, Pb	
	Nickel, Ni	
	Zinc, Zn	
	Boron, B	
	Total Solids	APHA 2540 B
	Total Dissolved Solids	APHA 2540 C
	Total Suspended Solids	APHA 2540 D
	Biochemical Oxygen Demand	APHA 4500-O H and APHA 5210
	(BOD ₅)	В
	Dissolved Oxygen	APHA 4500-O H
	Total Organic Carbon	APHA 5310 B
	Inorganic Carbon	
	Total Carbon	
	<u>Anions</u>	APHA 4110 B
	Fluoride, F	
	Chloride, Cl	
	Bromide, Br	
	Phosphate, PO ₄ ³⁻	
	Sulfate, SO ₄ ²⁻	
	Nitrite, NO ₂ -	
	Nitrate, NO ₃	
	<u>Cations</u>	In-house test method MKA TM04
	Lithium, Li ⁺	by Ion Chromatography
	Sodium, Na ⁺	3 1 7
	Ammonium, NH ⁴⁺	
	Potassium, K ⁺	
	Magnesium, Mg ²⁺	
	Calcium, Ca ²⁺	
	Nitrogen, Ammonia, NH ₃₋ N	HACH Method 8038, 9th Edition 2017
	Total Nitrogen	In-house test method MKA TM03
minomonatol Bilonitonio	Hardness by Caladatian	by TOC/TN Analyzer
nvironmental Monitoring	Hardness by Calculation	APHA 2340 B, 23rd Edition, 201
Vater And Wastewater		& Inhouse test method MKA TM0
vastewater	Total Dhaamhar	by Ion Chromatography
	Total Phosphorus	HACH Method 8190, 10th Edition
		2017

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Environmental Monitoring Water And Wastewater Drinking Water tap Water Ground Water surface Water wastewater	Nitrogen, Ammonia	HACH Method 10001, 10th Edition, 2021
Environmental Monitoring Water And Wastewater surface Water Ultrapure Water Lake Water	Threshold Odor	APHA 2150 B
Environmental Monitoring Water And Wastewater treated Water	Chlorine, Total Chlorine, Free	HACH Method 8167, 11th Edition, 2022 HACH Method 8021, 9 th Edition,
Drinking Water surface Water		2014
Water Potable/drinking And Domestic drinking Water	Bisphenol A Bisphenol S	In-house test method MKA TM06 based on Agilent Application Note 5991- 1412EN, 2012
	Organochlorine Pesticides Hexachlorobenzene BHC-gamma (lindane) Heptachlor Aldrin Heptachlor epoxide cis-chlordane trans-chlordane Endosulfan Dieldrin p,p'-DDT p,p'-Methoxychlor	EPA Method 525.3, 8th Edition, 2012
	Alkalinity	HACH Method 8221, 9th Edition, 2017

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Measured / Range Of Measurement	Equipment / Techniques
Volatile Organic Compounds	EPA Method 8260 D
1,1-Dichloroethene	&
Methylene chloride	EPA Method 5030 C
trans-1,2-Dichloroethene	
1,1-Dichloroethane	
2,2-Dichloropropane	
cis-1,2-Dichloroethene	
Bromochloromethane	
Chloroform	
1,1,1-Trichloroethane	
Carbon tetrachloride	
1,1-Dichloropropene	
Benzene	
1,2-Dichloroethane	
Trichloroethene	
1,2-Dichloropropane	
Dibromomethane	
Bromodichloromethane	
cis-1,3-Dichloropropene	
Toluene	
trans-1,3-Dichloropropene	
1,1,2-Trichloroethane	
Tetrachloroethene	
1,3-Dichloropropane	
Dibromochloromethane	
1,2-Dibromoethane	
Chlorobenzene	
1,1,1,2-Tetrachloroethane	
Ethylbenzene	
m+ p-Xylene	
0-Xylene	
Styrene	
Bromoform	
Isopropylbenzene	

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Volatile Organic Compounds Bromobenzene	EPA Method 8260 D &
	Bromobenzene 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane n-Propylbenzene 2-Chlorotoluene 1,3,5-Trimethylbenzene 4-Chlorotoluene tert-Butylbenzene 1,2,4-Trimethylbenzene sec-Butylbenzene 1,3-Dichlorobenzene p-Isopropyltoluene 1,4-Dichlorobenzene n-Butylbenzene 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Trichlorobenzene 1,2-Trichlorobenzene Hexachlorobutadiene	& EPA Method 5030 C
	Naphthalene 1,2,3-Trichlorobenzene	
Water Surface Water Ground Water	Total Hardness Silica	HACH Method 8226, 8th Edition, 2015 HACH Method 8185, 9th Edition,
Potable/drinking And Domestic drinking Water	Silica	2014
Water Surface Water Ground Water	Hardness by Calculation	APHA 2340 B & In-house test method MKA TM04 by Ion Chromatography
	Total Phosphorus	HACH Method 8190, 10th Edition, 2017
Water Surface Water	Color	HACH Method 8025, 10th Edition, 2014
Potable/drinking And Domestic drinking Water	Conductivity	HACH Method 8160, 10th Edition, 2021
Water Potable/drinking And Domestic drinking Water Tap Water	Pharmaceutical Compounds (Negative Ionization) Aspirin Ibuprofen Gliclazide Diclofenac	In house test method MKA TM08 based on Agilent Application Note 5991-6115EN, 2015
Water Others surface Water marine Water	Oil & Grease	APHA 5520 D

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SCOPE OF TESTING: MICROBIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Microbiological Environmental Sample Water Water And Waste Water	otal Coliform & E.coli Count	In-house test method MKA TM05 based on APHA 9222 J
Microbiological Environmental Sample Water Waste Water Surface Water Ground Water	Thermotolerant (Fecal) Coliform Count	APHA 9222 D (Membrane Filtration)
Microbiological Environmental Sample Water Drinking Water	Total Coliform & E.coli Count	In-house test method MKA TM07 based on Colilert Test Kit notes, IDEXX Laboratories Inc. USA, 2019
	 Clostridium perfringens count Sulphite Reducing Clostridia count 	Methods for the Examination of Waters and Associated Materials – The Microbiology of Drinking Water (2021) – Part 6
	Fungi Count	APHA 9610 C
Microbiological Environmental Sample	Fecal Enterococcus/Streptococcus Count	APHA 9230 C (Membrane Filtration)
Water Drinking Water Ground Water	Pseudomonas aeruginosa Count	APHA 9213 E (Membrane Filtration)
Microbiological Environmental Sample Water Drinking Water Surface Water	- Heterotrophic Plate Count (22°C) - Heterotrophic Plate Count (37°C)	Methods for the Examination of Waters and Associated Materials – The Microbiology of Drinking Water (2020) – Part 7
Microbiological Environmental Sample Surface Water Wastewater	Vibrio sp.	Methods for the Examination of Waters and Associated Materials (2016) — Part 9, Standing Committee of Analysts, UK
	- E. coli count - Extended Spectrum Beta Lactamase E.coli (ESBL E.coli) count	Tricycle Protocol for WHO Integrated Global Surveillance on ESBL E.coli, 2021
	Salmonella sp.	Methods for the Examination of Waters and Associated Materials (2016)- Part 8, Standing Committee of Analysts, UK