

Schedule

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LABORATORY LOCATION/ CENTRAL OFFICE:	Analytical Technology and Services Department, Malaysian Refining Company Sdn. Bhd. Analytical Technology and Services Department Malaysian Refining Company Sdn. Bhd. Bangunan Pentadbiran Persiaran Penapisan, 76300 Sungai Udang, Melaka. , 76300, MELAKA MALAYSIA
	
ACCREDITED SINCE :	25 MARCH 2025
FIELD(S) OF TESTING:	CHEMICAL

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:	Analytical Technology and Services Department, Malaysian Refining Company Sdn. Bhd. Analytical Technology and Services Department Malaysian Refining Company Sdn. Bhd. Bangunan Pentadbiran Persiaran Penapisan, 76300 Sungai Udang, Melaka. , 76300, Melaka
FIELD(S) OF TESTING :	CHEMICAL,

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
(boiler Water, Surface	Chemical Oxygen Demand	APHA 2540D
(continued)	Smoke Point	ASTM D1322
	Determination of Calcium	MS 679: Part - V: Part IV, Clause 5,
	Force at Break(0-500N)	None
	Elongation at break (0 -" 1000%)	
	None	None
	None	None
	None	None
	None	None
	None	ASTM E 190:2014

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	a. Vickers (HvN)	ASTM E384-2017
	Nitrofurans residues:	In-house Method, Ref. No. MOH D03-
	None	DIN ISO 34-1:2016 AS 1683.12: 2001 (2018)
	Abrasion Resistance	ASTM D5963-04 (2019) (Method A) ISO 4649: 2017 (Method A) DIN ISO 4649:2014 (Method A)
	DC to 1 kHz	(of reading) 0.0035 Q
	at Frequency: 2.5 MHz to 1.3 GHz	(of reading)
	1 kHz	0.000048 nF
	100 Q DC to 1 kHz	0.023 Q
	None	0.5 bar
	None	None
	Liquid Limit	None
	None	None
	None	None
	None	None
(crude & Condensate)	Density (Hydrometer)	ASTM D1298
(fuels - Diesel, Jet A-1,	Ash	ASTM D482
(lpg)	Copper Corrosion	ASTM D1838
Base Oil, Fuel Oil, Low	ASTM Color (Manual)	ASTM D1500
Cooling Water, Domestic	pH	None
Feedstock	Copper Corrosion	ASTM D130
Gasoline/mogas, Reformate,	Cetane Index	ASTM D976
Liquefied Petroleum Gas	Composition	IP 473
Petrochemical Naphtha,	Carbon Residue (Micro Method)	ASTM D4530
Petroleum Products	Acidity	ASTM D3242
	Sediment by Extraction	ASTM D473
	Determination of Flash Point by	ASTM D 93
	Density and Relative Density of	ASTM D4052-02 (JKM 01/12) by
	Water Content	ASTM D6304-16e1 (Procedure A) (Coulometric Karl Fischer)
	Density	ASTM D4052-18
	Composition analysis C8+	In-House Method 0522 based on ASTM D5442 17 Gas Chromatography
	None	None
Reverse Osmosis Water,	Phosphate	None
	Sulphur Waxy Residue)	ASTM D156
	Suspended Solid	None
Wastewater)	Ammonia	ASTM D1293
	None	None
	None	None
	None	None
	and Escherichia coli	None

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	None	filtration)
	Clostridium perfringens	ISO 14189: 2013 (E)
	None	None
	None	None
	None	None
	None	(2005)
	None	21% Edition (2005)
	Colour	APHA 2120 C 2005
	Determination of Volatile	Method EPA 524.2 By Purge & Trap
	Oxygen Demand (COD) for High	APHA Method 5220D
	None	In-house Method JKM W 0502,
	None	on APHA 4110 B-"lon
	Colony Count at 36°C	JKM M 2038, ISO 6222:1999 (E)
	Intestinal Enterococci	i) WI 16 -" Sample Preparation for
	Enumeration of Clostridium	JKM M 2035
	Detection of pathogenic	JKM B 0201 Detection of pathogenic
	Identification and Quantification	JKM B 0406
	pH	APHA - 4500-H B
	None	None
	None	None
	None	None
	None	None
	Boron	HACH METHOD 8015
	None	None
	E. coli	APHA 9221 F (MPN Method)
	None	None
	Total Organic Carbon	APHA 5310 C
	Heterotropic plate count	APHA 9215 B, 22"4 Edition (2012)
	None	(Membrane Filtration Technique)
	None	None
	Metals by ICP	None
	None	None
	None	None
	None	None
	None	None
	None	None
	pH	ASTM D 1293-2005 (Method B) APHA 4500 H* B 2005/2017
	pH	ASTM D1293-2005 (Method B) APHA 4500 H* B 2005/2017
	None	None
	Turbidity	APHA 2130B
	On-site Sampling & Testing (pH Temperature, Turbidity)	In-house Method SOP-0222-2001 & SOP-0222-2003
	Coliform	APHA 9221 B, Edition, 2005
	Heterotrophic plate count in	APHA Method 9215 D, Edition,

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	pH Value	BS 1377-3 : 2018 Clause 12
	pH Value	BS 1377-3 : 2018 Clause 12
	None	None
	Calcium Hardness as CaCO ₃ ,	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
	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
	None	None
	None	None
	Escherichia coli and coliform	ISO 9308-1: 2014 (E) / Enumeration
	Pseudomonas aeruginosa	ISO 16266:2006 (E) / Detection and

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	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 Tl	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
	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

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	None	None
Water, Demineralised Water,	Iron	None
Water, Processed Water,	Phenol	None