

NO: SAMM 449

Page: 1 of 9

LABORATORY LOCATION/ CENTRAL OFFICE:	Analytical Technology Santong, Petronas Gas Berhad Gas Processing Santong KM 8, Kg. Tok Arun Off Jalan Santong 23100 Paka, Terengganu , 23100, TERENGGANU MALAYSIA
	
ACCREDITED SINCE :	06 APRIL 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 Santong, Petronas Gas Berhad Gas Processing Santong KM 8, Kg. Tok Arun Off Jalan Santong 23100 Paka, Terengganu , 23100, Terengganu
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
E Butane	n-Butane, iso-Butylene, neo Pentane,	None
E Ethane	Mercury	ASTM D 6350-14
E Industrial Effluent	None	Demand
	pH	APHA 4500- H*B
	BOD	APHA 5210 B & 4500-0 G
	COD	APHA 5220 D
	Total Suspended Solid	APHA 2540 D
	Oil & Grease	APHA 5520 B
	Ammoniacal Nitrogen	APHA 4500- B & F
	Colour	APHA 2120 F
	None	None
	Trivalent Chromium	APHA 3500-Cr B & APHA 3120 B,

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 2 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Oil and Grease	In-house method, WI-TEC-M044,
	Arsenic	None
E Industrial/ Cooling	pH	None
E Methane	None	None
E Portable And Domestic	None	None
E Process Water	None	None
E Propane	Propane, Propene, i-Butane,	None
E Sewage Water	Determination of Total Suspended	None
E Steam/ Boiler Water	None	None
Environmental	pH	ASTM D 1293-18
	None	None
	None	None
	PH value at 25 °C	*APHA 4500-H* B, 2005
	Iron (as Fe), mg/L	*APHA 3111 B, 2005
	Oil and grease	*APHA 5520 B, 2005
	Turbidity	APHA 2130B, 2017
	Metals	APHA 3030 F and APHA 3120 B
	None	on APHA 9222 J
	None	on Colilert Test Kit notes, IDEXX
	None	None
	None	None
	Aerobic Plate Count	CMMEF Chapter 3; 1992 & FDA/
	None	None
	None	None
Liquefied Petroleum Gas	Composition	ASTM D 2163-14
	Detection of Liquefied	In House Method JKM 01/14, based
	Composition	IP 473
Monitoring	None	(Method B)
	None	APHA 4500-H* B, 2017
	None	APHA 3111 B, 2017
	None	APHA 5520 B, 2017
	None	None
	Aluminium, Al	None
	Yeast Count	based on Compendium of Methods
	None	based on Compendium of Methods
	None	In-House Method SOP-ENV-006
	None	None
	None	None
	None	None
	Arsenic	None
	None	None
	Chromium, Cr	NIOSH 7024
	None	None
	Oxides Emissions from	Monitor FEM-7 V1.3)
	None	None

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 3 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Natural Gas	Ethane, Propane, n-Butane, i-Butane,	None
	Tentative Method of Extended	None
	Standard Test Method for Mercury	ASTM D6350-14
	Composition analysis (C1- C11, C12+, N2, CO2)	GPA 2286-14 Gas Chromatography
	Calculated Properties	ISO 6976:2016
	Gas Composition by Gas Chromatography	GPA 2261-00
	Composition analysis C1-C11, C12+	GPA 2286-14 Gas Chromatography
	Mercury	ASTM D6350-14 Cold Vapor Atomic Fluorescence Spectroscopy (Analysis)
	Hydrocarbons (C1 -" C12+), CO2,	None
Petroleum And	Composition	ASTM D 1945-14
Petroleum Products	(Carbon Dioxide, Nitrogen, Methane,	None
	Dynamic Viscosity and Density of Liquids	ASTM D7042-21
	Water in Petroleum Products	ASTM D95-13
	Pour Point of Petroleum	ASTM D97-17b
	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
	None	None
	Standard Test Method for	None
Purposes	None	None
	None	None
	None	None
	None	None
	None	None
Water	None	ASTM D 1293-18
	None	None
	Turbidity	APHA 2130 B
	pH	APHA 4500 H* B 23rd Edition
	Total solid dried at 103°C -" 105 °C	APHA 2540 B (2005)
	Enumeration of Plankton	Marine Water (PBPCL-STP-PP-1)
	None	APHA 4500 Norg B (2017) and

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 4 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	USP Chapter Bacterial
	Coliform, Fecal Coliform &	APHA 9222 B.G.H.D
	None	APHA 3111 B, 2017
	None	APHA 3111 B, 2017
	None	None
	None	from HACH Method 8023, DR3900
	PH test	APHA 4500 H*B Edition 2017)
	Total suspended solids	APHA 2540 D Edition 2017)
	Turbidity Test	APHA 2130 B Edition 2017)
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	MLSS	None
	Hydrocarbon, PAH	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Selenium (Se) Chromium (Cr)	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Ammonical Nitrogen	APHA 4500-NH3
	None	None
	Lead	APHA 3120 B
	Tin	None
	Iron	None
	Heterotropic plate count	APHA 9215 D
	Standard total coliform	APHA 9222 B
	None	None
	None	None
	pH	APHA - B
	Escherichia coli and Coliform	ISO 9308-1:2014 (E) / Enumeration by
	Bisphenol A	In-house test method MKA TMO6 based

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 5 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Total Hardness	HACH Method 8226, 8" Edition, 2015
	Hardness by Calculation	APHA 2340 B & In-house test method
	Color	HACH Method 8025, Edition, 2014
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Determination of pH	APHA 4500-H* B, 2005
	Determination of chloride	APHA 4500-CI B, 2005
	Determination of sulphate	APHA B, 2005
	Determination of alkalinity	APHA 2320 B, 2005
	Determination of total solids	APHA 2540 B, 2005
	pH	APHA 4500 H*B
	Color	APHA 2120 C (2017)
	Heterotrophic Plate Count	APHA 9215 B (2017)
	Standard Total Coliform	APHA 9221 B (2017)
	Escherichia coli	APHA 9221 F (2017)
	Examination for Legionella spp.	AS/NZS 3896:2008
	pneumophila	None
	Staphylococcus aureus count	APHA 9213 B (2017)
	Fecal Streptococcus	APHA 9230 C (2017)
	Pseudomonas aeruginosa	APHA 9213 F (2017)
	Identification of Escherichia coli	In-house Method GPS/QA/TM/001
	Identification of Shiga-toxigenic	In-house Method GPS/QA/TM/004
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Ammonia	ASTM D1293
	None	None
	None	None
	None	None
	None	None
	and Escherichia coli	None
	None	filtration)
	Clostridium perfringens	ISO 14189: 2013 (E)

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 6 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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,
	None	None
	None	None

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Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 7 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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
	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
	Ammonium nitrogen	BS 6068: Section 2.7:1984 ISO 5664:1984

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 8 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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
	None	None
	None	None

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 449

Page: 9 of 9

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None

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