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LABORATORY LOCATION/ CENTRAL OFFICE:	ASEAN Bintulu Fertiliser Sdn. Bhd. 18 KM, Tanjung Kidurong 97008 Bintulu, Sarawak , 97008,
ENCE AND GET	SARAWAK
	MALAYSIA
ACCREDITED SINCE :	19 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:	ASEAN Bintulu Fertiliser Sdn. Bhd. 18 KM, Tanjung Kidurong 97008 Bintulu, Sarawak , 97008, Sarawak
FIELD(S) OF TESTING:	CHEMICAL,

Type Of Test / Brenerties

SCOPE OF TESTING: CHEMICAL

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Material / Product Tested	Measured / Range Of Measurement	Equipment / Techniques
Ammonia	Oil and Grease (ppmw)	QAI-LABTEST-002 ABF In-house method: Adopted from UKF0013-E Operating Manual, Volume 7, 1983
	Water (% wt) Ammonia (% wt) ? by calculation	QAI-LABTEST-115 The Fertilizer Sampling and Analytical Methods Fourth Edition, Method II.E.1 The Fertilizer Institute Product Quality Committee USA, 1982
Urea Granules	Sampling	Sampling and Analytical Methods, Edition 1982, Method .C.1 The Fertilizer Institute Product Quality Committee USA

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Sampling	QAI-LABTEST ? 011 Method B In-
	Biuret (%)	house method based on Fertilizer QAI-LABTEST-206 In-house method: Adopted from DSM- 135-E, 135-23-E, 382-E (Spectrophotometric Method) and
		from Official Method of Analaysis AOAC International 18 Edition, Method 960.04, 2005
	Formaldehyde (% wt)	QAI-LABTEST-213 In-house method: Adopted from NSM Method (Nederlandse Stikstof Maatschappij B.V) Sluiskil
	Moisture / Water (% wt)	QAI-LABTEST-209 In-house method: Based on DSM-805- E or Fertilizer Sampling and Analytical Method, Fourth Edition, Method II- D.4 by The Fertilizer Institute Product Quality Committee, USA, 1982
	Size (% wt) Size Guide Number (SGN) Uniformity Index (UI)	QAI-LABTEST-211 In-house method: Adopted from NSM Method (Nederlandse Stikstof Maatschappij B.V) Sluiskil & from Fertilizer, Sampling & Analytical Method, Fourth Edition, Method IV.A by Institute Product Quality Committee, USA, 1982
	Total Kjeldahl Nitrogen (wt) Total Nitrogen (Dry)	QAI-LABTEST-210 A&B In-house method: Based on DSM-201- E (Total Kjeldahl Nitrogen Method) & from Official Method of Analysis of AOAC Edition, Method 955.04, 2005
Water And Waste Water	Temperature (In situ)	QAI-LABTEST-030 Adopted from APHA Method 2550B, 23" Edition, 2017
	pH 1-14	QAI-LABTEST-013
	Specific gravity & Density (g/cm)	QAI-LABTEST-036 In-house method based on Anton Paar Handbook, DMA 35N Portable Density/Specific Gravity Meter
	Conductivity (uS/cm)	QAI-LABTEST-020 In-house method based on APHA 2510 A & B, 23 Edition, 2017
	Phosphate as Orthophosphate	QAI-LABTEST-017 In-house method based on APHA 4500-P C, 23" Edition, 2017

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Chloride (mg/l)	QAI-LABTEST-010 In-house method based on APHA 4500-CI B, 23 Edition, 2017 & UDHE A.1.11.3
	Silica (mg/l)	QAI-LABTEST-008 In-house method based on APHA 4500-Si D & E, Edition, 2017
	Acidity and alkalinity (mg/l as	QAI-LABTEST-004 In-house method based on APHA 2310 B & 2320 B, 23" Edition, 2017
	Ammonia- Nitrogen (mg/l)	QAI-LABTEST-001 In-house method based on ASTM 1426A, Vol 11.01.1997
	Metals Fe (mg/l) K (mg/l) Ca (mg/l) Mg (mg/l) Mn (mg/l) Cu (mg/l) Cd (mg/l) Cr (mg/l) Pb (mg/l) Ni (mg/l) Zn (mg/l) Na (mg/l) As (mg/l)	QAI-LABTEST ? 708 APHA 3120 B, 234 Edition, 2017 ASTM Volume 03.05, 2003, E 1479
	Mercury (ppb)	QAI-LABTEST-703 ?Method C? Inhouse method based on APHA 3112 B, 23" Edition, 2017
	Oil & Grease (mg/l)	QAI-LABTEST-002 In-house method based on APHA 5520 C, 23" Edition, 2017
	Free Residual Chlorine (FRC) (mg/l) (In situ)	QAI-LABTEST-027 In-house method based on APHA 4500-CI G, 23? Edition, 2017
	Total Suspended Solids (TSS) dried at 103 ?C ? 105 ?C	QAI-LABTEST-005 In-house method based on APHA 2540 D, 23? Edition, 2017
	Chemical Oxygen Demand (COD)	QAI-LABTEST-003 In-house method based on APHA 5220 C & D, 23" Edition, 2017
	Biochemical Oxygen Demand	QAI-LABTEST-035 In-house method based on APHA 5210 B,23" Edition, 2017
Waste Water Raw Water Condensate Cooling Water	Chloride (mg/l) Nitrite (mg/l) Nitrate (mg/l) Sulphate (mg/l)	QAI-LABTEST-058 APHA 4110 B 23" Edition, 2017 (Ion Chromatography)
Benfield Solution	Potassium Carbonate, Potassium Bicarbonate & Total Carbonate (%)	QAI-LABTEST-123 In-house based on UOP Method R- 100D Rev 1
	Total Suspended Solids (mg/l)	QAI-LABTEST-123 In-house method based on APHA 2540 D, 23 Edition, 2017
	Vanadium (%)	QAI-LABTEST-123 In-house method based on Method UDHE A.38.6.4

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Urea Solution	Ammonia (NH3) and Carbon	QAI-LABTEST-204 In-house
	Dioxide (CO2) (% NH3 & % CO2)	method based on DSM 648- 10 E
	, , , , , , , , , , , , , , , , , , , ,	& APHA 4500-CO2 C&D, Edition,
		2017
Water / Urea Solution	Urea (ppm to %)	MS 417: Part 3: 1994
	Urea (ppm to %)	QAI-LABTEST-205 A, B In-house
	οτοά (pp το 7,5)	method DSM 0210-03-E &
Lube Oil	Total Acid Number	QAI-LABTEST ? 043 ASTM D
	7 3 3 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3	664-01
	Kinematic Viscosity (cSt)	QAI-LABTEST ? 040 In house
	Tamemane Viscosity (set)	method based on ASTM D445-03
		& D446-00
Emission Air	SOx (mg / NOx (mg / Nms)	QAI-LABTEST ? 022 Bacharach
25010117111	Cox (mg/ Nox (mg/ Nmo)	Combustion Analyser Model ECA
		450 Operating & Service Manuals
Emission, Air And Gas	Urea Dust (mg/NM?)	QAI-LABTEST-324 Adopted from
Emission, All And Ods	Orea Dust (mg/NW:)	ASTM D3685/3685M-92
Gas	Gas Composition : Natural Gas	QAI-LABTEST-100 In-house
Gas		
	and other gaseous components:	Method by Gas Chromatography
	Argon: (% mole) Nitrogen: (%	Applicable Equipment Manual
	mole) Methane : (% mole) Ethane	
	: (% mole) Propane : (% mole) i-	
	Butane : (% mole) n-Butane : (%	
	mole) i-Pentane : (% mole) n-	
	Pentane : (% mole) Hexane + : (%	
	mole) Hydrogen : (% mole)	
	Oxygen : (% mole) Carbon Dioxide	
	: (ppm to % mole) Carbon	
	Monoxide : (ppm to % mole)	
Urea Formaldehyde Solution	Formaldehyde (%) Water (%)	None
	Urea (%) Appearance pH SG	QAI-LABTEST-401 In-house
		method based on Borden
		Chemical
Sodium Hydroxide	NaOH (%) NaCO3 (%) Chloride	008-?Analysis of Silica?
	(%) Silica (ppm)	
	NaOH (%) NaCO3 (%) Chloride	QAI-LABTEST-407 In-house
	(%) Silica (ppm)	method based on JIS K 1200-1968
		and ABF Test Method : QAI-
		LABTEST-010- ?Chloride in
		Water? and QAI-LABTEST-
Sulphuric Acid	Appearance H2S04 (%) Chloride	QAI-LABTEST-410 In-house
·	(%)	adopted from ABF Test Method :
		QAI-LABTEST-004 ?Alkalinity and
		Acidity of Water?, QAI-LABTEST-
		010- ?Chloride in Water

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Liquid Or Solution Of Multiphase And Single Phase Liquids At Elevated And Medium Temperature And Pressure	Sampling	QAI-LABTEST ? 011 Method C Inhouse method based on DSM M-3E, APHA 1060 B and Sampling and Analytical Methods, Edition 1982 Method ?1.B.4.a The Fertilizer Institute Product Quality Committee USA, 1982
Procured Chemicals	Sampling	QAI-LABTEST ? 011 Method D In-
From Shore Tanks, Semi Bulks, Drums And Carboys	Sampling	house method based on ASTM E 300- 92 Sampling industrial Chemicals ? Simple Liquid
Anhydrous Liquid Ammonia	Sampling	Product Quality Committee USA
	Sampling	Fertilizer Sampling and Analytical Methods, Edition 1982, Method 1 The Fertilizer Institute
	Sampling	QAI-LABTEST ? 011 Method A Inhouse method based on