Schedule

Issue date: 06 April 2025
Valid Until: -

NO: SAMM 655

LABORATORY LOCATION/ CENTRAL OFFICE:	I-Testchem Laboratory Services 1st Floor Sublot 6 Contempo Commercial Centre 94300 Kota Samarahan, Sarawak , 94300, SARAWAK 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:	i-Testchem Laboratory Services 1st Floor Sublot 6 Contempo Commercial Centre 94300 Kota Samarahan, Sarawak , 94300, Sarawak
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**
(continued)	Ammoniacal Nitrogen	APHA B&F, Edition
	None	(Clause 11.5 and 11.6)
	None	None
	None	None
	None	None
	None	None
	moisture content relationship	BS 1377:1990, Part 4, Clause 3
	compressive strength	BS 1377:1990, Part 7, Clause 7.2
	distribution: wet sieving, dry	BS 1377:1990, Part 2, Clause 9.2,
	number of a soil	Equipment: glass beaker, test tube
	test	None
	Power frequency magnetic field	IEC 61000-4-8:2009
	11. Determination of Viscosity	In-house ESL QPL A011

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	Boron (as % B2Os)	In-house Method P02-10 based on
	None	and Management unit PORIM pg.31
	None	1994
	None	None
	Seal Degradation Test	AS/NZS 4284: 2008 (Clause 8.10)
	Seismic and Wind Induced Inter	AAMA 501.4-2018 (Clause 7.0)
	None	None
	None	None
	None	None
	None	None
	Escherichia coli	APHA 9221.F (MPN) APHA 9222.H (Membrane Filter)
	Fecal Streptococci	APHA 9230.C (Membrane Filter)
	Clostridium perfringens	HPA NSM WS5 Issue 3 (Membrane Filter)
	Pseudomonas aeruginosa	APHA 9213.E (Membrane Filter)
	Sulphite reducing anaerobes	ISO 6461-2:1986 (Membrane Filter)
	penetration)	None
	Dynamic Water Penetration Test	AAMA 501.1-17
	Seal Degradation Test	AS/NZS 4284:2008
	Seismic and Wind Induced Inter	AAMA 501.4-2009
	None	ASTM E330/ E330M-14
	of Transparent and Opaque Liquids	None
	Smoke Point	ASTM D1322
	Determination of Calcium	MS 679: Part - V: Part IV, Clause 5,
	Force at Break(0-500N) Elongation at break (0 -” 1000%)	None
	None	None
	None	None
	None	None
	None	None
	None	ASTM E 190:2014
	a. Vickers (HvN)	ASTM E384-2017
	Nitrofuran 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

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	100 Q DC to 1 kHz	0.023 Q
	None	0.5 bar
	None	None
	Liquid Limit	None
	None	None
	None	None
	None	None
Fertilizer	Sample Preparation	MS 417: Part 1: 1994-Clause 5
	Moisture	MS 417: Part 2: 1994-Clause 3
	Moisture	MS 417: Part 2: 1994
	None	None
	Moisture	n-house Method PBL/LTM/F1,
	Total Nitrogen	In-house method F05 based on MS ISO 13878: 2014
	Determination of Moisture	MS 417: Part 2: Clause 3, Method |:
	Total Magnesium as MgO	In-House No. FT02 (Based on
	None	None
	Determination of Phosphorus,	In-House Method, TM-02
	Total Nitrogen (as N)	In-house Method, Ref. No. F2, based
Fertilizer (continued)	Total Copper	AOAC 965.09: 2005
	Total Zinc	AOAC 965.09: 2005
Plant	Sample Preparation	MS 677: Part (a): 1980
	Ashing and Preparation of Ash Solution	MS 677: Part II: 1980
	Ash Content	In-house Method ITC/TM/P02 based on AOAC 923.03 20" Edition, 2016
	Nitrogen	MS 677: Part III: 1980 Clause 2
	Phosphorus	MS 677: Part IV: 1980
	Potassium	MS 677: Part V: 1980
	Calcium	MS 677: Part VI: 1980
	Magnesium	MS 677: Part VII: 1980
	Total Boron	In-house Method ITC/TM/P12 based on MS 417: Part 7: 2001-Clause 6.2.3
	Copper	In-house Method ITC/TM/P08 based on AOAC 975.03 20" Edition, 2016
	Zinc	In-house Method ITC/TM/P09 based on AOAC 975.03 20" Edition, 2016
	Iron	In-house Method ITC/TM/P10 based on AOAC 975.03 20" Edition, 2016

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Manganese	In-house Method ITC/TM/P11 based on AOAC 975.03 20" Edition, 2016
	Ash	MS 677:Pt. I-VIII:1980, Part II
	Manganese (Mn)	In-house Method, P3, Based on
	Sample Preparation for Plant	In-house Method, Ref. No. P5,
	N	n-house Method PBL/LTM/P1,
	Fe	In-house Method PBL/LTM/P9,
	Preparation of Leaves for	MS 677: Pt I - VIII: Part I: 1980
	Ash	MS 677: Part II: 1980
Soil	Sample Preparation	In-house Method ITC/TM/S01 based on MS 678: Part 0: 1980
	pH	MS 2457: 2012
	Nitrogen	MS 678: Part II: 1980- (a)
	Organic Carbon	MS 2469: 2012
	Total Phosphorus	In-house Method based on MS 678: Part VIII: 1980
	Available Phosphorus	In-house Method ITC/TM/S08 based on A laboratory manual of methods of Soil Analysis research Branch Agriculture Department Sarawak 1993, clause 19
	Exchangeable Cations (K,Mg,Ca)	In-house Method ITC/TM/S06 based on MS 678: Part IV: 1980
	Cation Exchange Capacity	In-house Method ITC/TM/S07 based on MS 678: Part V: 1980
	Particle Size Analysis	In-house Method ITC/TM/S10 based on ASA-SSSA, Methods of Soil Analysis 1986, Part 1, Chapter 15
	Determination of In-situ Density	BS 1377: Part 9: 1990
	2.5 kg Rammer	BS 1377-2:2022
	Clay, Silt, Fine Sand &	In-house Method, S1, Based on
	Phosphorus (total)	In-house Method, S5, Based on MS 678:Pt. VI to IX:1980, Part VIII
	Phosphorus (total)	In-house Method, S6, Based on MS 678:Pt. VI to IX:1980, Part VIII and QuikChem® Method 12-115-01-1-N
	Cation Exchange Capacity (C.E.C)	MS 678:Pt. to V:1980, Part V
	Cation Exchange Capacity (C.E.C)	In-house Method, S7, Based on MS 678:Pt. to V:1980, Part V and QuikChem® Method 13-107-06-2-D
	Total Exchangeable Bases: Potassium (K)	MS 678:Pt. to V:1980, Part IV (Flame photometry)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Total Exchangeable Bases: Potassium (K)	In-house Method, S8, Based on MS 678:Pt. to V:1980, Part IV and QuikChem® Method 12-119-03-1-C
	Sodium (Na)	In-house Method, S9, Based on MS 678:Pt. to V:1980, Part IV
	Calcium (Ca)	MS 678:Pt. to V:1980, Part IV (Atomic Absorption Spectrophotometry)
	Magnesium (Mg)	MS 678:Pt. to V:1980, Part IV (Atomic Absorption Spectrophotometry)
	Determination of Particle Size	Part 2: MS 1056 2013 Section 10.2
	Mechanical Analysis (Clay, Silt, Fine & Coarse Sand)	In-house Method, Ref. No. S1, Based on The Bouyoucos Hydrometer Method for Particle Size Analysis,
	Arsenic (As)	None
	Determination of Electrical Conductivity in Soil Sample	In-House Method P702-07 base on MS 2458:2012
	Moisture Content Test - Oven Drying Method	MS 1056: Part 2: 2005
	Liquid Limit Test - Casagrande Method	MS 1056: Part 2: 2005
	Liquid Limit Test - Cone Penetrometer Method	MS 1056: Part 2: 2005
	Plastic Limit Test	MS 1056: Part 2: 2005
	Plasticity Index	MS 1056: Part 2: 2005
	Linear Shrinkage	MS 1056: Part 2: 2005
	Specific Gravity- Small Pyknometer Method	MS 1056: Part 2: 2005
	Particle Size Distribution -” Wet Sieving Method	MS 1056: Part 2: 2005
	Sedimentation -” Hydrometer Method	MS 1056: Part 2: 2005
	Compaction Test	MS 1056: Part 4: 2005 (Clause 4.2, 4.5, 4.6)
	Determination of pH value	BS 1377 : Part 3: 1990, Clause 9
	Determination of chloride content	BS 1377 : Part 3: 1990, Clause 7
	Determination of sulphate content	BS 1377 : Part 3: 1990, Clause 5 (Gravimetric)
	Determination of organic matter content	BS 1377 : Part 3: 1990, Clause 3
	Determination of moisture content	BS 1377 : Part 2: 1990, Clause 3.2
	Determination of particle size distribution	BS 1377 : Part 2: 1990, Clause 9.3

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Determination of In-situ Density and Moisture Content	Soils for Civil Engineering Purposes, BS 1377:1990, Part 9: Clause 2.1-Sand Replacement
	Determination of In-situ Density and Moisture Content	Soils for Civil Engineering Purposes, BS 1377:1990,
	Moisture Content	BS 1377: Part 2: 1990, Clause 3.2.4
	Moisture Content	BS 1377: Part 2: 1990, Clause 3.2
	Particle Size Distribution	BS 1377: Part 4: 1990, Clause 9.5
	Field Density Test: Core Cutter	BS 1377: Part 9: 1990, Clause 2.4
	Determination of Moisture	BS 1377:Part 2:1990 Clause 3.2
	Particle Size Distribution	BS 1377: Part 2: 1990, Clause 9.2 & 9.3
	Moisture Content	BS 1377: Part 2: 1990, Clause 3.2
	California Bearing Ratio (Soaked)	BS 1377: Part 4: 1990, Clause 7
	Dry Density / Moisture Content Relationship (4.5 kg Rammer Method)	BS 1377: Part 4: 1990, Clause 3.6
	Liquid Limit (Casagrande Apparatus Method)	BS 1377: Part 2: 1990, Clause 4.5
	None	Part 2: BS 1377 1990, Clause 5.3 & 5.4
	Dry Density / Moisture Content	Part 4: MS 1056 2005, Clause 4.5 & 4.6
	Dry Sieving Method	MS 1056 Part 2 : 2005, Clause 10.3 Part 2 : 1990, Clause 9.3 BS 1377
	Determination of Moisture Content	BS 1377: Part 2: 1990 Clause 3.2
	Moisture Content	BS 1377 Part 2: 1990 : Clause 3.2
	Liquid Limit (Cone Penetrometer Method)	BS 1377 Part 2: 1990 : Clause 4.3
	In-situ Density Test by Sand	None
	pH	MS 2457: 2012
	Electrical Conductivity	MS 2458: 2012
	Available Phosphorus	In-house method S07 based on Bray & Kurtz, 1945 & ICP-OES
	Total Nitrogen	MS ISO 13878: 2014
	Total Phosphorus	In-house method S13 based on EPA Method 3050B & ICP-OES
	Determination of Particle Density (Small Pyknometer Method)	BS 1377:1990 Part 2, Clause 8.3
	Determination of Particle Size Distribution (Dry Sieving Method)	BS 1377:1990 Part 2, Clause 9.3
	Determination of Particle Size Distribution (Wet Sieving Method)	BS 1377:1990 Part 2, Clause 9.2
	Determination of Particle Size	None
	Determination of Water Content	BS 1377: Part 2
	Determination of pH value of fine	BS 1377-3: 2018

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Determination of Soil pH	MS 678: Part - V: Part |, Soil pH:
	None	None
	Total Recoverable Elements	USEPA 200.2 Rev. 2 : 8 EMMC
	Chloride	MS 678: Part VI to
	In-situ Density Test	BS 1377: Part 9:1990 Clause 2.1
	Moisture Content	BS EN ISO 17892-1:2014
	Particle Size Distribution -" Wet	BS EN ISO 17892-4:2016
	Arsenic, Mercury, Cadmium,	EPA 3050 B
	Loss on Ignition	BS 1377 part 3: 1990 (Clause 4)
	Carbonate	BS 1377 Part 3: 1990 (Clause 6.3)
	Moisture Content	BS 1377-1: 2016
	In-situ California Bearing Ratio (CBR)	BS 1377 : Part 9 : 1990 Clause 4.3
	Moisture Content	BS 1377-1: 2016
	In-situ California Bearing Ratio (CBR)	BS 1377 : Part 9 : 1990 Clause 4.3
	pH Value	BS 1377-3:1990:9.5
	None	None
	Aluminum (Al)	USEPA 200.2, Revision 2.8, 1994
	Particle Size Distribution (gravel,	In House Method 0588 based on
	Determination of Particle Size Distribution for Soils	BS 1377: Part 2: 1990 Clause 9
	Determination of Moisture Content	BS 1377: Part 2: 1990 Clause 3.2
	Determination of the Liquid Limit (Casagrande apparatus method)	BS 1377: Part 2: 1990 Clause 4.5
	Determination of the Plastic Limit and Plasticity Index	BS 1377: Part 2: 1990 Clause 5
	Determination of dry density/moisture content relationship (Rammer Method)	BS 1377: Part 4: 1990 Clause 3.3, 3.4, 3.5 & 3.6
	Determination of dry density/moisture content relationship (Vibrating Hammer Method)	BS 1377: Part 4: 1990 Clause 3.7
	Determination of soil density test	BS 1377: Part 2: 1990 Clause 7
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Determination of In-Situ Density	BS 1377: Part 9: 1990
	Determination of The Moisture	BS 1377: Part 2:1990: Method 3.2
	Toxicity characteristic leaching	USEPA 1311: 1992
	Phosphorus, P Sulphur, S	None
	SVOCs (Refer to Appendix 2 and 3 for	EPA Method 3510C: 1996
	Determination of Moisture Content	BS 1377:2:1990, Clause 3.2 MS 1056:2:2005, Clause 4.2
	Determination of Density	BS 1377:2:1990, Clause 7.2 MS 1056:2:2005, Clause 8.2
	Linear Shrinkage	BS 1377:2:1990, Clause 6.5 MS 1056:2:2005, Clause 7.5

Issue date: 06 April 2025
Valid Until: -

NO: SAMM 655

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Determination of Particle Density	BS 1377:2:1990, Clause 8.3 MS 1056:2:2005, Clause 9.3
	Determination of Liquid Limit Using Casagrande Method	BS 1377:2:1990, Clause 4.5 & 4.6 MS 1056:2:2005, Clause 5.5 & 5.6
	Determination of Liquid Limit Using Cone Penetrometer Method	BS 1377:2:1990, Clause 4.3 & 4.4 MS 1056:2:2005, Clause 5.3 & 5.4
	Determination of the Plastic Limit	BS 1377:2:1990, Clause 5
	Maximum dry density / Moisture content relationship	BS 1377: Part 4: 1990
	Shear Strength Test without	None
	The laboratory Vane e	BS 1377: Part 7: 1990: Clause 3
	Field Density Test (Sand Replacement Method)	BS 1377: Part 9:1990 Clause 2.1
	Plastic limit test	Test instruction reference to BS
	Moisture content	BS1377-2, Clause 4.1
Water Or Waste Water	pH	APHA 4500-H* B, 22"¢ Edition
	Biological Oxygen Demand BODs @ 20°C	APHA 4500-OC, 5210 B, 22" Edition
	Chemical Oxygen Demand, COD	APHA 5220 C, Edition
	Chloride	APHA B, Edition
	Phosphorus	APHA 4500-P C, 22" Edition
	Total Nitrogen, Kjeldahl	APHA 4500-Norg B, 22"4 Edition
	Total Solids	APHA 2540 B, 22"4 Edition
	Total Dissolved Solids	APHA 2540 C, 224 Edition
	Suspended Solids	APHA 2540 D, Edition
	Oil and Grease	APHA 5520 B, Edition