



Accreditation Scope

Arab Geotech for Soil Investigation LLC, NAL 083 Testing Laboratory, (ISO/IEC 17025:2017)

Industrial Mussafah M46, Abu Dhabi, UAE

Issue Date: 26-01-2023

Expiry Date: 07-04-2024

Issue No: 06

Testing Field	Materials/ Products tested	Type of test/ Test parameter/ Properties measured/Range of measurement	Test Method (Standard, Internal Procedure, Technique)	Permanent lab (P) / Client-site (S)
Geotechnical	Soil	Standard Penetration Test	*BS 1377-9:1990 Cl 3.3	S
		Soil Sampling	BS 5930:2015, Section 4, Cl. 25	
	Water	Ground water level management	BS 5930:2015; Section B Cl.52.2, 52.3 & 52.10 Stand pipe piezometer Cl 52.5	S
		Ground water sampling	BS 5930:2015; Section 4, Cl. 26.4	
	Soil & Rock	Soil & Rock description	BS 5930:2015; Section 6, Cl. 33 & 36	P/S
		Classification of Soils	ASTM D2487-17 ^{e1}	
		Determination of water (moisture) content of soil and rock by mass	ASTM D 2216-19	P
	Soil	Particle size distribution	*ASTM D 422-63 (2007)	P
		Liquid limit, Plastic limit and plasticity index of Soils	*BS 1377-2:1990; AMD 9027-1996, Cl. 4.5 Casagrande Method Cl. 5.3 & 5.4	
		Hydrometer Analysis	BS 1377-2 :1990; Cl. 9.5 AMD 9027-1996 BS EN ISO 17892-4:2016-Cl.4.2, 5.3 & 6.2	
		Moisture (Water) Content of Soil	BS EN ISO 17892-1:2014	
	Rock	Rock quality designation	BS 5930:2015; Section 6, Cl. 36	P/S
		Core Recovery	BS 5930:2015; Section 6, Cl. 36	
		Preparation of rock core	ASTM D 4543-19	P
		Unconfined Compression Strength	ASTM D7012 – 14e1	
Point Load Strength Index		ATM D5731-16/ SRM RTH-25-89		
Report	Ground Investigation	Code of practice for ground Investigations- Reporting	BS 5930:2015; Section 10, Cl. 63	



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Physical	Soil	In-situ Density by Sand Replacement Method (Large pouring cylinder)	ASTM D 1556/D 1556-15e1 BS 1377-9:1990 AMD-8264-1995; Cl.2.2	S
	Hardened Concrete	Shape, dimensions and other requirements for specimens and molds	BS EN 12390-1:2012	P
		Making and curing specimens for strength tests	BS EN 12390-2:2019	
		Compressive strength of test specimens	BS EN 12390-3:2019	
		Density of hardened concrete	BS EN 12390-7:2019	
		Precast concrete paving blocks - Measurement of dimension and plan area	BS 6717-1: 1993 Annex A	
		Precast concrete paving blocks - Determination of compressive strength	BS 6717-1: 1993 Annex B	
		Precast concrete masonry units - Measurement of dimension	BS 6073-1 :1983 Appendix A (AMD 4462-84)	
		Precast concrete masonry units - Compressive strength	BS 6073-2:1983 Appendix B (AMD 4508-84)	
		Water Absorption of Concrete	BS 1881-122:2011	
		Water Permeability of Concrete	*DIN 1048-5:1991	
		Depth of Penetration of Water Under Pressure	BS EN 12390-8:2019	
		Compressive Strength of Concrete Core	BS EN 12504-1:2019 BS EN 12390-3:2019	P / S



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Physical	Aggregate	Determination of particle shape. Flakiness index	BS EN 933-3:2012	P
		Flakiness Index	*BS 812-105.1:1989	
		Elongation Index	*BS 812-105.2:1990	
		Particle Size Distribution (PSD)	BS EN 933-1-2012	
		Relative Density (Specific Gravity) and Absorption of Fine Aggregates	ASTM C128-15	
		Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregates	ASTM C 127-15	
		Sieve Analysis of Fine and Coarse Aggregates	AASHTO T27-20	
	Non-Destructive Testing	Non-Destructive Testing of Concrete in Structures – Determination of Rebound Hammer	BS EN 12504-02:2021	S
		Corrosion Potentials of Uncoated Reinforcing Steel in Concrete	ASTM C876-15	
		Determination of Ultrasonic Pulse Velocity of Concrete	BS EN 12504-4:2021	
		Determination of carbonation depth in hardened concrete by the phenolphthalein method	BS EN 14630:2006	
		Recommendations on the use of Electromagnetic Covermeters in Testing Concrete	BS 1881-204:1988	



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Physical	Steel	Tensile Properties & Elongation of Reinforcement Bars	BS 4449: 2005+A3:2016 Cl. 7.2.3 BS EN ISO 15630-1:2019; Cl. 5 BS EN ISO 6892-1:2019	P
		Bend Test – Carbon steel bars for the reinforcement of concrete	BS 4449:1988, App C, Cl. 1.6.1	
		Rebend Test – Steel for the Reinforcement of Concrete	BS 4449:2005+A3:2016; Cl. 7.2.5 BS EN ISO 15630-1-2019; Cl. 7	
	Soil	Dry Density - Moisture Content Relationship using 4.5 kg Rammer	BS 1377-4:1990; AMD. 13925:2002 Cl. 3.5 & 3.6	P
		Determination of Moisture Content	BS 1377-2:1900; Amd. 9027-1996, Cl. 3.2	
		Laboratory Compaction Characteristics of Soil Using Modified Efforts	ASTM D1557-12e1	
		Determination of California Bearing Ratio (CBR)	BS 1377-4:1990; Cl. 7	
		California Ratio (CBR) of Laboratory Compacted Soils	ASTM D1883-16	
		Particle Size Distribution by Sieving Method	BS EN ISO 17892-4-2016 Cl. 5.2	
		Particle Size Distribution Using Sieve Analysis	ASTM D6913/D6913M-17	
		Moisture (Water) Content of Soil	BS EN ISO 17892-1:2014	
		Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop	AASHTO T180-21	
		Density of Soil In-Place by the Sand-Cone Method	AASHTO T191-14(2018)	
		California Bearing Ratio	AASHTO T193-13(2021)	



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Physical	Soil	Laboratory Determination of Moisture Content of Soil	AASHTO T265-15(2019)	P
		Determination of Liquid Limit of Soil	AASHTO T89-13(2021)	
		Determination the Plastic Limit and Plasticity Index of Soil	AASHTO T90-20	
		Plate Load Test of Soil	BS 1377-9:1990/ AASHTO T222-21(2021) /ASTM D 1194-94	
	Bitumen	Quantitative Extraction of Bitumen from Bituminous Paving Mixture	ASTM D2172/D2172M-2017	
	Asphalt	Mechanical Size Analysis of Extracted Aggregate	ASTM D5444-15	
		Specific Gravity, Density and Water Absorption of Non-Absorptive Compacted Asphalt Mixtures	ASTM D2726/D2726M-21, Clause 10.2	
		Preparation of Asphalt Mixture Specimens Using Marshall Apparatus	ASTMD6926-20	
		Theoretical Maximum Specific Gravity of Asphalt	ASTM D2041/D2041M-19	
		Marshall Stability and Flow of Asphalt Mixtures	ASTM D6927-15	
Bitumen	Thickness of Compacted Bituminous Paving Mixture specimens	ASTM D3549/D3549M-18		
Geophysics	Soil	Multichannel Analysis of Surface Waves (MASW)	MS-58 (In-house Method)	S
		Electrical Resistivity Tomography (ERT)	MS-59 (In-house Method)	S



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Chemical	Soil	Acid soluble sulphate content of soil	BS 1377-3: 2018+ A1:2021 Clause 7.2.3, 7.6, 7.9	P	
		Water soluble sulphate content of soil	BS 1377-3: 2018+ A1:2021 Clause 7.2.3, 7.3, 7.6		
		Acid soluble chloride content of soil	BS 1377-3: 2018+ A1:2021 Clause 9.1, 9.2.7.1, 9.2.2, 9.3		
		Water soluble chloride content of soil	BS 1377-3: 2018+ A1:2021 Clause 9.1, 9.2.2, 9.2.3, 9.2.4, 9.2.5, 9.2.7 & 9.2.8, 9.2.9.1, 9.2.9.3, 9.2.10		
		pH of soil	BS 1377-3: 2018+ A1:2021 Clause 12		
		Water Soluble salts of Soil	BS 1377-3:2018; Cl. 11 & Earth Manual (Des. 8)		
	Ground water		pH of ground water	BS 1377-3: 2018+ A1:2021 Clause 12	P
			Sulphate content of ground water	BS 1377-3: 2018+ A1:2021, Clause 7.6, 7.8	
			Chloride content of ground water	BS 1377-3: 2018+ A1:2021 Clause 9.1, 9.2.2, 9.2.4, 9.2.7, 9.2.8, 9.2.10	
			Total Dissolved solids of water	BS 1377-3:2018; Cl 11	
	Hardened Concrete		Sulphate content of hardened concrete	BS 1881-124: 2015; Cl.12.2	P
			Chloride content of hardened concrete	BS 1881-124: 2015; Cl.12.1	
	Water, Wastewater		pH	APHA 4500 H+B: 23 rd Ed. 2017	P
			Electrical Conductivity	APHA 2510 B: 23 rd Ed. 2017	
			Turbidity	APHA 2130 B: 23 rd Ed. 2017 (Nephelometric method)	
Total Suspended Solids dried at 103-105°C			APHA 2540 D: 23 rd Ed. 2017		
Total Dissolved Solids at 180 °C			APHA 2540 C: 23 rd Ed. 2017		



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Chemical	Water, Wastewater	Calcium	APHA 3500 Ca B: 23 rd Ed. 2017(EDTA Titrimetric method)	P
		Magnesium	APHA 3500 Mg B: 23 rd Ed. 2017(Calculation method)	
		Total Hardness	APHA 2340 C: 23 rd Ed. 2017(EDTA Titrimetric method)	
		Total Alkalinity mg CaCO ₃ /L	APHA 2320 B: 23 rd Ed. 2017(Titration method)	
		Carbonates and Bicarbonates	APHA 2320 B: 23 rd Ed. 2017(Titration method)	
		Chloride	APHA 4500 Cl- B: 23 rd Ed. 2017(Argentometric method)	
		Ammonia	HACH 10205 10/2020 Ed. 11(Salicylate method)	
		Free Chlorine	HACH 8021 01/2014 Ed. 9(US EPA DPD method)	
		Fluoride	HACH 8029 08/2018 Ed. 10(US EPA Spadns method)	
		Nitrate	HACH 8039 01/2019 Ed. 10	
		Nitrite	HACH 8507 08/2019 Ed. 11 (Diazotization method)	
		Orthophosphate (Reactive Phosphorus)	HACH 8048 01/2017 Ed. 10 US EPA PhosVer 3(Ascorbic acid) method	
		Sulfate	HACH 8051 10/2019 Ed. 11	
		Metals- Aluminium Antimony Arsenic Barium Boron Cadmium Calcium Chromium Cobalt	APHA 3120 B: 23 rd Ed. 2017 & APHA 3030 E: 23 rd Ed. 2017	



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Chemical	Water, Wastewater	Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Potassium Selenium Silver Sodium Strontium Thallium Vanadium Zinc	APHA 3120 B: 23rd Ed. 2017 & APHA 3030 E: 23rd Ed. 2017	P
		Mercury	US EPA 200.7 Revision 4.4 (1982)	
	Water (ultrapure)	Silica	HACH 8186 09/2019 Ed. 10(Heteropoly blue method)	
	Water	Silica	HACH 8185 01/2014 Ed. 9(Silicomolybdate method)	
	Wastewater	Biochemical Oxygen Demand (BOD)	APHA 5210 B: 23rd Ed. 2017(5 day BOD test)	
		Chemical Oxygen Demand (COD)	APHA 5220 B: 23rd Ed. 2017(Open Reflux method)	
		Oil & Grease	APHA 5520 B: 23rd Ed. 2017 (Liquid-Liquid, Partition-Gravimetric method)	
		Sulfide	APHA 4500 S ²⁻ F: 23rd Ed. 2017 (Iodometric method)	



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Microbiological	Water, Wastewater, Swimming pool water	Heterotrophic Plate Count	APHA 9215 B: 23 rd Ed. 2017(Pour plate method, 35 °C / 48h)	P
		Total Coliforms	APHA 9222 J: 23 rd Ed. 2017 (Dual Chromogen Membrane Filter Procedure)	
		E. coli	APHA 9222 J: 23 rd Ed. 2017 (Dual Chromogen Membrane Filter Procedure)	
		Total Coliforms	APHA 9222 B: 23 rd Ed. 2017 (Membrane filter procedure using Endo media)	
		Thermotolerant (Fecal) Coliform	APHA 9222 D: 23 rd Ed. 2017 (Thermotolerant (Fecal) Coliform membrane filter procedure)	
	Water, Wastewater, Swimming pool water	Fecal Enterococcus/ Streptococcus	APHA 9230 C: 23 rd Ed. 2017 (Membrane filter technique)	P
		Enumeration of Legionella	ISO 11731:2017 Matrix A -Procedure 1, Matrix B- Procedure 8, 9 and 10, Matrix C- Procedure 14	
	Recreational waters	Pseudomonas aeruginosa	APHA 9213 E: 23 rd Ed. 2017 (Membrane Filter technique)	P
	END			

* Standards are superseded / withdrawn.