

AL BARAHA

TECHNICAL LABORATORIÉS

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YOU BUILD IT

BATLABS TEST IT

Laboratory Testing

Field Testing & Monitoring













BATLABs provides advanced engineering Material services Testing. QA/QC Management and Project Troubleshooting.

BATLABs' goal is to take part in the Customers' aim to provide a safe and reliable construction through timely and accurate testing services.



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1 - INTRODUCTION

Al Baraha Technical Laboratories also known as "BATLABS" was established on January 2004. The laboratory is located at Building 47, St. 558 Zone 57, Industrial Area, Doha Qatar.

BATLABS is a high caliber, independent technical testing laboratory specializing in construction related materials.

Tests and services conducted are the following: soil testing; aggregate testing; pavement and asphalt testing; road marking testing; rock testing; concrete testing; chemical testing; drilling services, instrumentation and measurement, inspection and monitoring.

BATLABS endeavors to provide the highest quality testing services to construction industries. **BATLABS'** goal is to take part in the customers' aim to provide a safe and reliable construction through timely and accurate testing services.

BATLABS supports 101% the customers' thrust towards optimization of the value of investment in catering to the increasing and sophisticated needs of the construction industry.

BATLABS has a well qualified and trained workforce. These hardworking staff continuously strive to enhance their qualifications through attending seminars, workshops and training sessions. In-house and external trainings are continuously provided to advance the technical knowledge of staff.

We, at BATLABS, remain to be...

"Your Dependable Project Partner".



2 - BATLABS QUALITY POLICY

We at **BATLABS** are committed to achieve *total customer satisfaction* in the field of laboratory testing services specializing in construction related materials. With the vision to become a leading technical testing laboratory, we are set to *create loyal and satisfied customers* by providing superb and accurate service through highly effective system and highly trained workforce.

We are committed to achieve this by:

- ➤ Developing good professional practices and providing testing facilities that have the desired quality in accordance with customer requirements / references standards. Hence, creating an environment of trust and confidence with our customers.
- Maintaining accuracy, precision and reliability of testing services through the implementation, maintenance and compliance with the applicable national and international standards,
- Achieving required quality of services that meets and exceeds customers' expectations,
- ➤ Ensuring the respect of the confidentiality and impartiality principle through taking decisions based on objective evidence of compliance and not influenced by other interests or other parties.
- Creating a culture and environment of excellence that encourages and motivates our employees by imparting and updating trainings with regards to quality procedures and documentation,
- Complying with the requirements of ISO/IEC 17025:2017 and continually improving the effectiveness of the Management System.

Salim Shbib General Manager



Many industries are required to satisfy governmental regulations a variety of needs, deadlines and budget pressures. Let our engineers and project managers apply their industry knowledge of packaging, products and materials as well as the standards that regulate them to ensure compliance, manage timelines and provide value.

BATLABs offers a variety of services that support your business need for expertise, efficiency and solutions:

- ✓ Combination Product Testing
- ✓ Consumer Product Testing
- ✓ Customized Package Testing
- ✓ Laboratory Management
- ✓ Packaging Materials Testing
- ✓ Package Testing Consulting
- Package Validation Testing
- ✓ Materials Testing Services

We, at **BATLABs** provide scales calibrations at **Batching Plants** using standard weights and in accordance to our own accredited procedure.

BATLABs has experience across the construction materials testing industry – from routine laboratory testing to providing clients with specialized and unique solutions to emerging industry challenges.

Working across the geotechnical, material testing and consultancy fields, BATLABs provide the following services:



Soil Division

BATLABs Soil Division is equipped with the most recent machineries and equipment to perform soil tests required by the customers.

Our accredited soil testing laboratories undertake a range of geotechnical and construction material testing to determinate the physical characteristics of soils.





S.No.	Laboratory Tests	Reference Standard
1	Amount of Material in Soils Finer than No. 200 (75-m) Sieve	ASTM D1140
2	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3)	ASTM D1557
3	CBR (California Bearing Ratio) of Laboratory- Compacted Soils	ASTM D1883
4	Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass	ASTM D2216
5	Liquid Limit, Plastic Limit, and Plasticity Index of Soils	ASTM D4318
6	Correction of Unit Weight and Water Content for Soils Containing Oversize Particles	ASTM D4718
7	Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	ASTM D6913



S.N.	Laboratory Tests	Reference Standard
8	Methods of test for soils for civil engineering purposes Part 2: classification tests (Determination of moisture content)	BS1377 Part 2 Clause 3
9	Methods of test for soils for civil engineering purposes Part 2: Classification Tests (Determination of Liquid Limit (Cone Penetrometer))	BS 1377 Part 2 Clause 4.3
10	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Atterberg Casagrande Method)	BS 1377 Part 2 Section 4.5
11	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of Plastic Limit and Plasticity Index)	BS 1377 Part 2 Clauses 5.3 & 5.4
12	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of Particle Size Distribution)	BS 1377 Part 2 Clauses 9.2 & 9.3
13	Methods of test for soils for civil engineering purposes Part 4: Compaction-related tests (Determination of dry density / moisture content relationship)	BS 1377 Part 4 Clauses 3.5 and 3.6
14	Methods of test for soils for civil engineering purposes Part 4: Compaction-related tests (Determination of California bearing ratio)	BS 1377 Part 4 Clause 7



Onsite Testing/Supervision/Inspection/Monitoring

BATLABs staff work in locations around Qatar, which may include remote annex laboratories on remote sites or major infrastructure projects.

Heaving a laboratory onsite ensures that results can be obtained quickly to meet project timelines and budgets.

BATLABs field testing services under taken onsite include:

- Sampling and testing of soils
- Sampling and testing of stockpiles to standards
- Sand replacement testing
- Nuclear density testing
- Asphalt density

BATLABs provide supervision, inspection and monitoring services, including:

- ➤ Level 1 2 supervision
- Site assessments





Our staff are committed to delivering reliable, high quality results, which are setting international best practice and standards in line with QCS and other regulatory requirements.





S. No.	Field /Site Tests	Reference Standard
1	Density and Unit Weight of Soil in Place by Sand-Cone Method	ASTM D15561
2	In-Place Density and Water Content of Soil and Soil- Aggregate by Nuclear Methods (Shallow Depth)	ASTM D6938 ¹
3	Methods of test for soils for civil engineering purposes Part 9: In-situ tests (Sand replacement method suitable for fine, medium and coarse-grained soils (large and small pouring cylinder method)	BS 1377 Part 9 Clauses 2.1 & 2.2 ¹
4	Methods for test for soils for civil engineering purposes Part 9: In-situ tests (Filed Density test by Nuclear Gauge FDT)	BS 1377 Part 9 Clause 2.51
5	Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of in-situ California Bearing Ratio (CBR)	BS 1377 Part 9 Section 4.31
6	Sampling Aggregates	ASTM D75/D75M ¹
7	Testing aggregate Part 102: methods for Sampling	BS 812 Part 1021



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4	Methods for test for soils for civil engineering purposes Part 9: In-situ tests (Filed Density test by Nuclear Gauge FDT)	BS 1377 Part 9 Clause 2.51
5	Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of in-situ California Bearing Ratio (CBR)	BS 1377 Part 9 Section 4.31
6	Sampling Aggregates	ASTM D75/D75M ¹
7	Testing aggregate Part 102: methods for Sampling	BS 812 Part 1021
8	Sampling Asphalt Materials	ASTM D140/D140M1
9	Sampling Bituminous Paving Mixtures	ASTM D979/D979M1
10	Nuclear Density of Asphalt	ASTM D2950
11	Estimating Application Rate and Residual Application Rate of Bituminous Distributors	ASTM D2995



S. No.	Field/Site Tests	Reference Standard
12	Methods of test for soils for civil engineering purposes Part 9: In-situ tests In-situ vertical deformation and strength tests	BS 1377 Part 9 Section 4 ¹
13	Sampling and examination of bituminous mixtures for roads and other paved areas. Methods of test for the determination of density and compaction (Density and thickness of asphalt cores)	BS 598 Part 104, Section 4
14	Surface Irregularities in Concrete & Bituminous Road Surfaces by Travelling Beam Device	SOP/OPN/221
15	Sampling and the Amount of Testing of Hydraulic Cement	ASTM C183/C183M1
16	Making and Curing Concrete Test Specimens in the Field	ASTM C31 ¹
17	Slump of Hydraulic-Cement Concrete	ASTM C143/C143M ¹
18	Sampling of Freshly Mixed Concrete	ASTM C1721
19	Rebound Number of Hardened Concrete	ASTM C805/C805M ¹
20	Temperature of Freshly Mixed Hydraulic-Cement Concrete	ASTM C10641
21	Testing fresh concrete. Part 1: Sampling	BS EN 12350 Part 1 ¹
22	Testing fresh concrete Part 2: Slump test	BS EN 12350 Part 2 ¹
23	Testing fresh concrete Part 5: Flow table test	BS EN 12350 Part 5 ¹
24	Testing fresh concrete Part 6: Density	BS EN 12350 Part 6 ¹
25	Testing fresh concrete Part 7: Air content. Pressure methods	BS EN 12350 Part 7 ¹



3. Aggregate Division

BATLABS has set-up a modern testing facility to carry out Aggregate tests in accordance to QCS and BS/BS EN / ASTM Standards in the Aggregate Division.





S. No.	Laboratory Tests	Reference Standard
1	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	ASTM C88
2	Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing	ASTM C117
3	Lightweight Particles in Aggregate	ASTM C123/C123M
4	Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate	ASTM C127
5	Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate	ASTM C128
6	Resistance to degradation of small - size coarse aggregate by abrasion and impact in the Los Angeles machine	ASTM C131
7	Sieve Analysis of Fine and Coarse Aggregates	ASTM C136/C136M
8	Clay Lumps and Friable Particles in Aggregates	ASTM C142/C142M
9	Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	ASTM C535



Aggregates are used as a stable foundation with predictable, uniform properties. As such, their quality must be determined through specialist aggregate testing.

The better the quality, the more stable the construction.





S. No.	Laboratory Tests	Reference Standard
10	Reducing Samples of Aggregate to Testing Size	ASTM C702/702M
11	Sampling Aggregates	ASTM D75/D75M
12	Sand equivalent value of soils and fine aggregate	ASTM D2419
13	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	ASTM D4791
14	Fractured Particles in Coarse Aggregate	ASTM D5821
15	Testing aggregates Part 2: Methods for determination of Density (Particle density and water absorption)	BS 812 Part 2 Clause 5.4
16	Testing aggregate Part 102: methods for Sampling	BS 812 Part 102
17	Testing aggregates Part 103: Method for determination of particle size distribution. Sieve tests	BS 812 Part 103 Section 103.1
18	Testing aggregates Part 105: Methods for determination of particle shape. Flakiness index	BS 812 Part 105 Section 105.1
19	Testing aggregates Part 105: Methods for determination of particle shape. Elongation index of coarse aggregate	BS 812 Part 105 Section 105.2



S. No.	Laboratory Tests	Reference Standard
20	Testing aggregates Part 109: Methods for determination of moisture content (drying oven)	BS 812 Part 109
21	Testing aggregates Part 110: Methods for determination of aggregate crushing value (ACV)	BS 812 Part 110
22	Testing aggregates Part 111: Methods for Determination of Ten Per Cent Fines Value (TFV)	BS 812 Part 111
23	Methods of testing cement Part 3: Determination of setting times and soundness	BS EN 196 Part 3
24	Methods of testing cement Part 7: Methods of taking and preparing samples of cement	BS EN 196 Part 7 1
25	Tests for geometrical properties of aggregates Part 1: Determination of particle size distribution. Sieving method	BS EN 933 Part 1
66	ests for geometrical properties of aggregates Part 3: Determination of particle shape. Flakiness index	BS EN 933 Part 3
77	Tests for geometrical properties of aggregates Part 4: Determination of particle shape. Shape index (Elongation Index)	BS EN 933 Part 4
28	Shell Content Percentage of Shells in Coarse Aggregates	BS EN 933-7



BATLABs perform many tests on pavement and asphalt to be used in the construction and rehabilitation of pavements and roads.

Our pavement and asphalt testing services include:

- Pavement evaluation and maintenance
- Asphalt control and recycling review





S.No.	Field Tests	Reference Standard
1	Asphalt Coring (of different thickness and lengths)	BS 598 Part 104
2	Temperature Checking of Asphaltic Batch	BS EN 12697 Part 13
3	Sampling of Asphalt Material	BS 598 : 100 BS EN 12697 : 27
4	Sampling of Tack/Prime Coat Sheet	BS 598 ; 108



4. Asphalt and Pavement Division

BATLABS' Asphalt Division is equally equipped with upto-date apparatuses for testing the physical, mechanical and chemical properties of asphalt and bitumen.





S. No.	Laboratory Tests	Reference Standard
1	Penetration of Bituminous Materials	ASTM D5
2	Softening Point of Bitumen (Ring-and-Ball Apparatus)	ASTM D36
3	Sampling Asphalt Materials	ASTM D140/D140M
4	Sieve Analysis of Mineral Filler	ASTM D546
5	Sampling Bituminous Paving Mixtures	ASTM D979/D979M
6	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples	ASTM D1188
7	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures	ASTM D2041
8	Bulk Specific Gravity and Density of Non- Absorptive Compacted Bituminous Mixtures	ASTM D2726/D2726M



S. No.	Laboratory Tests	Reference Standard
9	Nuclear Density of Asphalt	ASTM D2950
10	Estimating Application Rate and Residual Application Rate of Bituminous Distributors	ASTM D2995
11	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	ASTM D3203/D3203M
12	Thickness or Height of Compacted Asphalt Mixture Specimens	ASTM D3549/D3549M
13	Sampling Compacted Bituminous Mixtures for Laboratory Testing	ASTM D5361/D5361M ¹
14	Mechanical Size Analysis of Extracted Aggregate	ASTM D5444
15	Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Vacuum Sealing	ASTM D6752/D6752M
16	Maximum Specific Gravity and Density of Asphalt Mixtures using Automatic Vacuum Sealing Method	ASTM D6857
17	Preparation of Asphalt Mixture Specimens Using Marshall Apparatus	ASTM D6926
18	Marshall Stability and Flow of Asphalt Mixtures	ASTM D6927
19	Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications	ASTM D6951/D6951M ¹
20	Reducing Sample of HMA to Test Size	AASHTO R 47
21	Methods of test for soils for civil engineering purposes Part 9: In-situ tests In-situ vertical deformation and strength tests	BS 1377 Part 9 Section 4 ¹
22	Bitumen and bituminous binders. Determination of the softening point. Ring and Ball method	BS EN 1427



S. No.	Laboratory Tests - (Asphalt Mixtures)	Reference Standard
23	Density of Semi-Solid Bituminous Materials (Pycnometer Method)	ASTM D70
24	Quantitative extraction of bitumen from bituminous paving mixtures	ASTM D2172
25	Bulk Specific Gravity and Density of Non- Absorptive Comp Bituminous Mixtures (Determination of Bulk Density) ASTM D272 Clause 10.1	
26	Sampling and examination of bituminous mixtures for roads and other paved areas. Methods of test for the determination of density and compaction (Density and thickness of asphalt cores)	BS 598 Part 104, Section 4
27	Sampling and examination of bituminous mixtures for roads and other paved areas. Method of test for the determination of the composition of design surface course rolled asphalt (Marshall stability and flow)	BS 598 Part 107
28	Bitumen and bituminous binders. Determination of needlepenetration	BS EN 1426 BS 2000-49
29	Bituminous mixtures. Test methods for hot mix asphalt. Soluble binder content	BS EN 12697-1
30	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the maximum density	BS EN 12697-5, Clause 9.3
31	Bituminous mixtures. Test methods for hot mix asphalt. Determination of bulk density of bituminous specimens	BS EN 12697-6, Clauses 9.2 & 9.3
32	Bituminous mixtures. Test methods for hot mix asphalt. Temperature measurement	BS EN 12697-13
33	Bituminous mixtures. Test methods for hot mix asphalt. Sampling	BS EN 12697-27 ¹
34	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the dimensions of a bituminous specimen	BS EN 12697-29
35	Bituminous mixtures. Test methods for hot mix asphalt. Specimen preparation by impact compactor	BS EN 12697-30



S. No.	Laboratory Tests - (Asphalt Mixtures)	Reference Standard
35	Bituminous mixtures. Test methods for hot mix asphalt. Specimen preparation by impact compactor	BS EN 12697-30
36	Bituminous mixtures. Test methods for hot mix asphalt. Marshall Test (Marshall stability and flow)	BS EN 12697-34
37	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the thickness of a bituminous pavement	BS EN 12697-36
38	Bituminous mixtures. Test methods for hot mix asphalt. Part 28: Preparation of samples for determining binder content, water content and grading	BS EN 12697 Part 28
39	Bituminous mixtures. Test method for hot mix asphalt Part 2: Determination of particle size distribution	BS EN 12697 Part 2
40	Bituminous mixtures. Test methods for hot mix asphalt Part 8: Determination of void characteristics of bituminous specimens	BS EN 12697 Part 8
41	Surface Irregularities in Concrete & Bituminous Road Surfaces By Travelling Beam Device	SOP/OPN/22 ¹



Concrete Division

The Concrete Division of **BATLABS** has sufficient capability for testing fresh concrete, hardened concrete, masonry blocks, paving blocks, kerbstones and etc.





S.No.	Laboratory Tests	Reference Standard
1	Making and Curing Concrete Test Specimens in the Field	ASTM C31 ¹
2	Compressive Strength of Cylindrical Concrete Specimens	ASTM C39
3	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete	ASTM C138/ C138M
4	Sampling and Testing Concrete Masonry Units and Related Units	ASTM C140/C140M ¹
5	Slump of Hydraulic-Cement Concrete	ASTM C143/C143M ¹
6	Sampling of Freshly Mixed Concrete	ASTM C172 ¹
7	Air Content of Freshly Mixed Concrete by the Pressure Method	ASTM C231/ C231M ¹
8	Chemical Admixtures for Concrete	ASTM C494/C494M
9	Density, Absorption, and Voids in Hardened Concrete	ASTM C642
10	Rebound Number of Hardened Concrete	ASTM C642
11	Temperature of Freshly Mixed Hydraulic-Cement Concrete	ASTM C1064 ¹
12	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration Rapid chloride permeability test (RCPT)	ASTM C1202



S. No.	Laboratory Tests	Reference Standard
13	Testing concrete. Part 111: Method of normal curing of test specimens (20°C method) Part 114: Testing concrete Methods for determination of density of hardened concrete Part 116: Method for determination of compressive strength of concrete cubes	BS 1881, Parts 111, 114, and 116 ¹
14	Testing concrete Part 122: Method for determination of water absorption	BS 1881 Part 122
15	Testing concrete Part 208: Recommendations for the determination of the initial surface absorption of concrete	BS 1881 Part 208
16	General requirements, sampling, sample preparation and test on materials before stabilization	BS 1924-1
17	Determination of Coefficient of Water Absorption due to Capillary Action of Masonry Units (And other related materials)	BS EN 772-11/BS EN 771-3
18	Determination of Total Water Absorption of Paving Blocks	BS EN 1338 Annex E
19	Determination of Total Water Absorption of Paving Flags	BS EN 1339 Annex E
20	Measurement of Dimensions for Concrete Kerb Units	BS EN 1340 Annex C
21	Determination of Total Absorption of Concrete Kerb Units	BS EN 1340 Annex E
22	Testing fresh concrete. Part 1: Sampling	BS EN 12350 Part 11
23	Testing fresh concrete Part 2: Slump test	BS EN 12350 Part 2 ¹
24	Testing fresh concrete Part 5: Flow table test	BS EN 12350 Part 5 ¹



S. No.	Laboratory Tests	Reference Standard
25	Testing fresh concrete Part 6: Density	BS EN 12350 Part 6 ¹
26	Testing fresh concrete Part 7: Air content. Pressure methods	BS EN 12350 Part 7 ¹
27	Testing hardened concrete Part 1: Shape, dimensions and other requiremmolds Part 3: Compressive strength of test specimensPart 7: Density of hardened concrete	BS EN 12390, Parts 1, 3, and 7
28	Testing hardened concretePart 2: Making and curing specimens for strength tests	BS EN 12390 Part 2 ¹
29	Testing concrete in structures Part 1: Cored specimen – taking, examining and testing in Compression	BS EN 12504 Part 1
30	Testing hardened concrete. Part 8: Depth of penetration of water under pressure	BS EN 12390 Part 8
31	Determination of the Compressive Strength of Hydraulically Bound Mixtures	BS EN 13286-41
32	Method for the manufacture of test specimens of hydraulic bound mixtures u sing vibrating hammer compaction	BS EN 13286-51
33	Water Absorption of Terrazzo Tiles	BS EN 13748 Part 1 5.5/5.8
34	Testing Concrete; Testing of Hardened Concrete (specimens prepared in mold) Part 5: Water Permeability Test of Hardened Concrete	DIN 1048 Part 5
35	Absorption of Water by Concrete by Immersion Under Vacuum	RILEM TC14 CPC 11.3
36	Chloride ion migration	NT Build 492-11
37	Precast concrete masonry units, measurement of dimension	BS 6073 Appendix A
38	Precast concrete masonry units, determination of compressive strength	BS 6073 Appendix B
39	Precast concrete paving blocks Part 1: Determination of compressive strength	BS 6717 Part 1 Ann. A & B



5. Road Marking Division





S. No.	Road Marking Services	Reference Standard
1	Thickness of Road Marking Materials	BS 3262 Part 3
2	Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer	ASTM E 2302
3	Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer	ASTM E 1710
4	Road marking materials. Road marking performance for road users Determination of Skid Resistance	BS EN 1436 +A1
5	No-Pick-Up Time of Traffic	ASTM D711



6. Rock Testing Division

Our laboratory in Qatar has acquired the latest technology in rock testing with a unique assemblage of equipment.

The primary aim of this specialist rock testing laboratory is to predict the performance of rock excavating equipment under various geological conditions.

We have suites of tests to predict the performance of the following equipment under different geological conditions:

S. No.	Rock Testing Services Division
1	Diamond Drilling
2	Percussive Drilling – DTH
3	Percussive Drilling – Top Hammer
4	Raise and Shaft Drilling over 2 m diameter
5	Raise borders under 3 m diameter
6	Road Headers
7	Rotary Drilling
8	Trenching
9	Tunnel Boring Machines







The individual tests used in the above predictive tests are described here:

- Physical Properties (the results of non destructive tests)
- ✓ Mechanical properties (the results of destructive tests)
- ✓ Abrasiveness
- ✓ Toughness
- ✓ Drillability
- ✓ Empirical correlations and predictions
- Splitting Tensile Strength of Intact Rock Core (ASTM 3967)
- ✓ Compressive Strength



7. Drilling Services

Geotechnical drilling allows investigation of subsurface materials and conditions and enables the reliable assessments of risks posed by these conditions.

It can also be used to determine the impact of groundwater on soils by determining its location, movement and depth.



S. No.	Drilling Services
1	Geotechnical Site Investigation
2	Flight Auger/Mud Drillings
3	Drilling Supervisor
4	Borehole Logging
5	Rock Core Logging
6	CPT Drilling and Testing



9. Chemical Division

BATLABS' possesses advanced chemical testing equipment in order to perform chemical tests required by customers.





S. No.	Laboratory Tests	Reference Standard
1	Testing concrete Part 124: Methods for analysis of hardened concrete (Determination of Sulphate content in hardened concrete)	BS 1881 Part 124, Clause 10.3
2	Testing concrete Part 124: Methods for analysis of hardened concrete (Determination of Chloride content in hardened concrete)	BS 1881 Part 124, Clause 10.2
3	Method of testing cement Part 2: Chemical analysis of cement Sul phate	BS EN 196 Part 2
4	Method of testing cement Part 2: Chemical analysis of cement Chloride	BS EN 196 Part 2
5	Admixtures for concrete, mortar and grout. Test methods. Reference concrete and reference mortar for testing Chloride Content of Admixture	BS EN 480



S. No.	Laboratory Tests	Reference Standard
6	Standard Test Method for Organic Impurities in Fine Aggregates for Concrete	ASTM C40/C40M
7	Chemical Admixtures for Concrete	ASTM C494/C494M
8	Specific Gravity, Apparent, of Liquid Industrial Chemicals	ASTM D891
9	Testing aggregates. Method for determination of water-soluble chloride salts	BS 812 Part 117 Appendix C
10	Testing aggregates. Methods for determination of Sulfate content	BS 812 Part 118 Clause 6
11	Tests for chemical properties of aggregates. Chemical analysis Determination of Acid Soluble Sulfate in Aggregates	BS EN 1744-1+A1
12	Tests for chemical properties of aggregates. Determination of acid soluble chloride salts	BS EN 1744-5
13	Method of testing cement: Part 2: Chemical analysis of cement -Loss on ignition	BS EN 196 Part 2, Clause 4.4.1
14	Method of testing cement: Part 2: Chemical analysis of cement - Insoluble residue	BS EN 196 Part 2, Clause 4.4.3
15	Method of testing cement: Part 2: Chemical analysis of cement - Impure silica	BS EN 196 Part 2, Clause 4.5.5
16	Method of testing cement: Part 2: Chemical analysis of cement - Pure silica	BS EN 196 Part 2, Clause 4.5.5
17	Method of testing cement Part 2: Chemical analysis of cement Calcium	BS EN 196 Part 2, Clause 4.5.14
18	Method of testing cement Part 2: Chemical analysis of cement - Aluminum	BS EN 196 Part 2, Clause 4.5.11
19	Method of testing cement Part 2: Chemical analysis of cement -Iron oxide	BS EN 196 Part 2, Clause 4.5.10
20	Method of testing cement Part 2: Chemical analysis of cement Magnesium oxide	BS EN 196 Part 2, Clause 4.5.15



S. No.	Laboratory Tests	Reference Standard
21	Methods of test for soils for civil engineering purposes. Chemical and electrochemical tests (Determination of acid soluble sulfate content)	BS 1377 Part 3, Clause 5
22	Methods of test for soils for civil engineering purposes. Chemical and electro-chemical tests (Determination of acid soluble chloride content)	BS 1377 Part 3, Clause 9
23	Methods of test for soils for civil engineering purposes. Chemical and electro-chemical tests (pH value)	BS 1377 Part 3, Clause 9
24	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests: Determination of the organic matter content Clause 3	BS 1377 Part 3, Section 3
25	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of Carbonate Content	BS 1377 Part 3, Section 6
26	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of the chloride content Determination of Water Soluble Chloride Content of Soil	BS 1377 Part 3, Section 7
27	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests (Determination of the sulphate content of soil and ground water) Determination of Water Soluble Sulphate Content of Soil	BS 1377 Part 3, Section 5
28	рН	APHA 4500 H +B: 22nd Edition 2012
29	Electrical Conductivity	APHA 2510 B: 22nd Edition 2012



S. No.	Laboratory Tests	Reference Standard
30	Total Dissolved Solids at 180 °C.	APHA 2540 C: 22nd Edition 2012
31	Chemical Oxygen Demand	APHA 5220 D: 22nd Edition 2012
32	Alkalinity, Carbonate, Bicarbonate, Hydroxide Alkalinity	APHA 2320 B: 22nd Edition 2012
33	Sampling	SOP/OPN/28
34	Turbidity	APHA 2130 B: 22nd Edition 2012
35	Nitrogen-Ammonia	HACH Method 8038
36	Nitrogen-Nitrate	HACH Method 8039
37	Chlorine	HACH Method 8021 (Adapted method of APHA 4500 Cl G): 22nd Edition 2012
38	Chloride	APHA 4500 CI -B: 22nd Edition 2012
39	Phosphorus	HACH Method 8048 (Adapted method of APHA 4500 -P E): 22nd Edition 2012
40	Sulphate	APHA 4500 SO4 2-C: 22nd Edition 2012
41	Iron	HACH Method 8008
42	Hardness	APHA 2340 C: 22nd Edition 2012
43	Magnesium	APHA 3500-Mg B: 22nd Edition 2012
44	Calcium	APHA 3500-Ca B 22nd Edition 2012
45	Copper	HACH Method 8506 (Adapted method of APHA 3500-Cu C): 22nd Edition 2012



4 - TECHNICAL AFFILIATION

BATLABS is legally registered with *QGOSM (MLD)*, recognized by *ASHGHAL* and possesses all legal compliances and commercial registration. In addition, BATLABS is an *ISO / IEC 17025:2017* accredited laboratory with 274 scope parameters including Site Laboratory. ASTM, BSEN, APHA are major reference standards being administered by Qatar Construction Specifications (QCS 2014).

We are the First Construction Material Testing Lab in Qatar to obtain the accreditation (from A2LA) of ISO/IEC 17025:2017. It is also entitled with the prestige of being the "ONLY LAB" having this accreditation all over Qatar and also "the ONLY LAB" among the "ASHGHAL (Qatar government body for infrastructural Development) approved testing labs in Qatar"



5 - LIST OF ASHGHAL PROJECTS

BATLABS was involved in various projects that has served a wide range of customers. The following projects are the current projects we are working with:

	S. No	PROJECT NAMES	CONTRACTOR	CTOR CONSULTANT CONTRACT NO.	
	1	A-Ring Road Interim Improvement	Boom Construction Company	ITAL Consult	C/2018/53
	2	Central Doha and Corniche Beautification - Package 3	Boom Construction Parsons Company International Limited		C/2020/91
	3	Construction of Flood Prevention Scheme (FPS - Phase 3) for Doha North Areas - C850/1	Boom Construction Parsons Company International Limited		C/2020/58
	4	Construction of Foul Sewer Network for Inner Doha – Package 2 C816/2	nner Services and Trading Engineering Group International		C/2018/100
	5	Construction of Foul Sewer Network for Inner Doha- Package 3B C816/3B	ner Contracting Company		C/2020/123
Ī	6	Construction of Foul Sewers for Inner Doha C816-Package 1	Lotus Trading and Contracting Company	Dorsch Qatar	C/2017/116
	7	Construction of Khufoos Street (P029 C1)	Boom Construction CDM Smith Company ENGICON Octor		C/2017/102
	8	Construction of Sewage Pumping Station PS 25/9A(N) in Katara – C818	Metito Overseas Qatar	ENGICON Qatar	C/2021/56
	9	Design & Build Contract for Al Wukair Pumping Station & Associated Works C845/A	Metito Overseas Qatar	Dorsch Qatar	C/2020/119
	10	Design and Build of West Bay Central Bus Station and Water Transport Ferry Terminals at Various Locations	on Contracting, Urbacon erry Trading and		C/2021/24



5 - LIST OF ASHGHAL PROJECTS

BATLABS was involved in various projects that has served a wide range of customers. The following projects were successfully completed;

S. No	PROJECT NAMES	CONTRACTOR	CONSULTANT	CONTRACT NO.	
11	Design and Construct New Orbital Highway and Truck Route P023 Contract 2 – Orbital Highway: Salwa Road To North Relief Road	QDVC / Bin Omran Trading and Contracting Company		C/2013/109	
12	Framework Agreement for Call-off Contracts for Landscaping and Ancillary Works	ELEGANCIA Landscape	ITAL Consult	C/2018/139	
13	Framework Agreement for Call Off Contracts for Landscaping Irrigation and Ancillary Works	Boom General Contractor (BGC)	ITAL Consult	C/2019/74	
14	Miscellaneous House Connection Works, Qatar North, FW-01-2021	Lotus Trading and Contracting Company	N/A	C/2021/84	
15	Miscellaneous House Connection Works, Qatar South, FW-03-2021	Metito Overseas Qatar	N/A	C/2021/86	
16	Miscellaneous House Connections, Work Order No. Sr_116	Metito Overseas Qatar	ASHGHAL- Internal	C/2020/06	
17	PWA/GTC/023/2017/L – Upgrade of Al Wakrah Main Road (P017 C1-IN)	Boom Construction Company	Jacobs Engineering Group	C/2018/57	
18	PWA/GTC/048/2019 & PWA/GTC/049/2019 - Roads & Infrastructure in Mebaireek (Zone 81) - Package 01 & Package 2	Boom Construction Company ITAL Consult		C/2020/124	
19	RIW (SCDL) Park and Ride and Non-Stadium Bus Infrastructure Works - Package 2	Qatar Building Company	Parsons International Limited	C/2022/3	
20	RIW for Junctions & Roundabouts in Various Areas of Greater Doha Phase 8	Boom Construction Company	Gulf Engineering and Industrial Consultancy	C/2019/62	



5 - LIST OF ASHGHAL PROJECTS

BATLABS was involved in various projects that has served a wide range of customers. The following projects were successfully completed;

S. No	PROJECT NAMES	CONTRACTOR	CONTRACTOR CONSULTANT	
21	RIW in Rayyan Areas Phase 5A	Boom Construction Company	Gulf C/2019/56 Engineering and Industrial Consultancy	
22	RIW in Rayyan Areas- 6B	Group Nine Joint Venture Trading and Contracting / ERAM EQUIPMENT RENTAL		C/2020/103
23	RIW South of Greater Doha Zone 90 to 95 Phase – 6B	Al Muntasser Contracting and Trading	racting and	
24	Road and Infrastructure in Al Sailiya / Al Atiya Housing & Al Atiya Army Camp Road	Qatar Building Company		
25	Road Maintenance - Doha South Area 3	Boom Construction Company	N/A	C/2020/48
26	Roads and Infrastructure Doha Industrial Area Package 4 (QS001-P04)	Boom Construction Company,Lotus Trading and Contracting Company Dar Al Handasah Consultants		C/2017/119
27	Roads and Infrastructure in Al Mearad and Southwest of Muaither - Package 02 (DW044- P02)	Marbu Contracting Company WLL	CDM Smith	C/2019/132
28	Roads and Infrastructure in Doha Industrial Area- Package 7	Qatar Building Company	CDM Smith	C/2019/129
29	Roads and Infrastructure in West Muaither (Al Manaseer)-Package 03	Boom Construction Company	ITAL Consult C/2019/5	



5 - LIST OF CURRENT ASHGHAL PROJECTS

ISO / IEC: 17025 - 2017 Certificate



Advance Grading Work in West of Umm Slal Mohamed - Package 1 ASSET IMPROVEMENT UNPLANNED WORKS - QATAR SOUTH (IA STW CALL-OFF PRICE AGREEMENT FOR LANDSCAPING, IRRIGATION, ANCILLARY WORKS AND TSE INFRASTRUCTURE

Construction of Flood Prevention Scheme (FPS - Phase 3) for Doha North Areas -

construction of khufoos street (P029 C1)

Construction of Remaining Works of C2017/111, Doha Industrial Area Offsite

Construction of the Arab International Academy Schools - Tarsheed

DESIGN AND CONSTRUCT NEW ORBITAL HIGHWAY AND TRUCK ROUTE P023

CONTRACT 2- ORBITAL HIGHWAY: SALWA ROAD TO NORTH RELIEF ROAD

Design and Construction of Industrial and Mubaireek Interchanges

Miscellaneous House Connection Works, Qatar North, FW-01-2021

Miscellaneous House Connection Works, Qatar South, FW-03-2021 Miscellaneous House Connections, Work Order No. Sr_116

Operation Flexibility Assessment and Implementation - PS 23 Rising Mains

PWA/GTC/023/2017/L - UPGRADE OF AL WAKRAH MAIN ROAD (P017 C1-IN)

RIW in Southern Areas (2021)

Roads and Infrastructure in Al Mearad and Southwest of Muaither - Package 02

Roads and Infrastructure in Al Wajba East - Package 01 (DW016-P01)

Roads and Infrastructure in Al Wajba East - Package 03

UPGRADING THE SURROUNDING ROADS OF THE LUSAIL SPORTS CIRCUIT

The Qatar PPP schools Development Program-Package-2

WSP International Marbu Contracting Company

N/A Aqualia Mace

Dorsch Qatar Boom General Contractor

Parsons International Boom Construction Company

CDM Smith **Boom Construction Company**

GEC Contracting Services and Trading Italconsult Ashghal-Internal

AECOM Qatar

Bin Omran Trading and Contracting

Company, QDVC Midmac Contracting Company,PORR

Qatar Construction

Boom General Contractor

Lotus Trading and Contracting Company N/A

Metito Overseas Qatar Ashghal-Internal Metito Overseas Qatar

Ashqhal-Internal **Metito Overseas Qatar**

Jacobs Engineering Group **Boom Construction Company Dorsch Qatar** Mokasco Express co - Papillon

Contracting and Services (JV) **CDM Smith Marbu Contracting Company**

CDM Smith Galfar Al Misnad Engineering and Contracting

Galfar Al Misnad Engineering and Italconsult

Contracting

KEO International International Heavy Equipment Consultants Transport and Contracting

Engineering Consultant Urbacon Trading & Contracting Group S.A



6 - LIST OF BATLABS CUSTOMERS

BATLABS has worked for a wide range of customers as an Independent Testing Laboratory.

- ❖ Boom Construction Company W.L.L
- ❖ Bin Omran Trading & Contracting Co. L.W.W
- Lotus Trading & Contracting
- Qatar Building Company
- UCC (Urbacon Contracating & Trading)
- Golden Tower Construction
- Ultracrete
- Urbacon Trading & Contracting
- Hyundai Engineering
- CCC/TCC JV
- Ternas Trading & Contracting
- Kahramaa
- QBS International
- ❖ Al Waha Contracting & Trading
- Public Works Authority
- Hassan Ali Bin Ali Ready Mix
- Midmac Colas
- ❖ Al Bawakir Unicon Company W.L.L
- JANAS Contracting Company
- Mideco Trading & Contracting
- Buzwair Engineering & Contracting
- Sanah Contracting
- Al Kholafaa
- Sea Shore
- Al Khayyat Contracting & Trading
- Al Jaber Trading & Contracting
- MATTA Contracting Qatar
- Arabian Masters Trading and Contracting (AMTC)
- ❖ Al Mohanna Trading and Contracting
- . Galfar Al Misnad
- Saad Bin Hassan
- ❖ Al Watan Trading and Contracting Co.
- Hassan Ali Bin Ali (HABA)
- ❖ Noors Engineering
- ACTS
- Mokasco Express Co. Papillion Contractting
- Marbu Contracting Co. W.L.L

- Aswan Trading and Contracting
- Gulf Contracting Co. W.L.L.
- ❖ Al Sraiya Trading and Contracting Co.
- Qatar University
- Ras Laffan Industrial City
- The Arab Architechs
- Umm Salal Municipality
- ❖ Petroserve Ltd.
- Qatar Petroleum
- Aamal Cement Industries
- Geotechnical Group
- Qatar Asphalt Plant Co.
- Castle Construction
- FUGRO
- National Block Company
- Metito Overseas Qatar
- Elegancia Landscape
- Marbu Contracting Company
- Ternas Trading & Contracting
- Babylon Landscape
- Group 9 Joint Ventures
- Boom General Company
- ❖ Boom Waste
- CTL Group Qatar
- QDVC
- DOMOPAN
- ❖ ERAM Trading
- NASCO Contracting and Trading
- IHETC
- Traffic Tech
- GEC Contracting Services and Trading
- Babylon Landscapes
- Royal Stone
- Landworx Trading and Contracing
- Khaled Projects Company
- ❖ Al Moaseron Trading and Contracting
- ❖ Al Muntasser Contracting and Trading
- CDCT
- **❖** ALCAT Contracting Company
- IHE (Int'l Heavy Equipment Transport & Contracting)



ISO / IEC: 17025 - 2017 Certificate



Accredited Laboratory

A2LA has accredited

AL BARAHA TECHNICAL LABORATORIES

Doha, Qatar

for technical competence in the field of

Construction Materials Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 22nd day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council

Certificate Number 4881.01 Valid to December 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Construction Materials Scope of Accreditation.



ISO / IEC: 17025 - 2017 Certificate



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AL BARAHA TECHNICAL LABORATORIES Zone 57, Street No.558, Building No. 47 Salwa Industrial Area Doha, Qatar 40572 Tareq Hani Abdallah Phone: +00974 55743879

CONSTRUCTION MATERIALS TESTING

Valid To: December 31, 2024

Certificate Number: 4881.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for:

Test Method:	Test Description:
Aggregates:	5471405074
ASTM C29/C29M	Bulk Density and Voids in Aggregates
ASTM C88/C88M	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123/C123M	Lightweight Particles in Aggregate
ASTM C127	Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C128	Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136/C136M	Sieve Analysis of Fine and Coarse Aggregates
ASTM C142/C142M	Clay Lumps and Friable Particles in Aggregates
ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C702/702M	Reducing Samples of Aggregate to Testing Size
ASTM D75/D75M1	Sampling Aggregates
ASTM D2419	Sand Equivalent Value of Soils and Fine Aggregate
ASTM D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5821	Fractured Particles in Coarse Aggregate
BS 812 Part 2 Clause 5.4	Testing aggregates Part 2: Methods for determination of Density (Particle density andwater absorption)
BS 812 Part 1021	Testing aggregate Part 102: methods for Sampling
BS 812 Part 103 Section 103.1	Testing aggregates Part 103: Method for determination of particle size distribution. Sieve tests

(A2LA Cert. No. 0037.01) 06/20/2023

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5202 Presidents Court, Suite 220 | Frederick, MD 21703-8398 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A^o



ISO / IEC: 17025 - 2017 Certificate

Test Method:	Test Description:
BS 812 Part 105 Section	Testing aggregates
105.1	Part 105: Methods for determination ofparticle shape. Flakiness index
BS 812 Part 105 Section	Testing aggregates
105.2	Part 105: Methods for determination of
3775674	particle shape. Elongation index of coarse aggregate
BS 812 Part 109	Testing aggregates Part 109: Methods for determination of moisture content (drying oven)
BS 812 Part 110	Testing aggregates Part 110: Methods for determination of aggregate crushing value(ACV)
BS 812 Part 111	Testing aggregates Part 111: Methods for Determination of Ten Per Cent Fines Value(TFV
BS 812 Part 112	Aggregate impact value
BS EN 196 Part 3	Methods of testing cement
STATE AND ADDRESS OF STATE AND ADDRESS.	Part 3: Determination of setting times and soundness
BS EN 196 Part 71	Methods of testing cement
	Part 7: Methods of taking and preparing samples of cement
BS EN 933 Part 1	Tests for geometrical properties of aggregates
	Part 1: Determination of particle size distribution. Sieving method
BS EN 933 Part 3	Tests for geometrical properties of aggregates
	Part 3: Determination of particle shape. Flakiness index
BS EN 933 Part 4	Tests for geometrical properties of aggregates
	Part 4: Determination of particle shape. Shape index (ElongationIndex)
BS EN 933-7	Shell Content Percentage of Shells in Coarse Aggregates
BS EN 1097-2	Methods for the determination of resistance to fragmentation
BS EN 1097-6	Determination of particle density and water absorption
Asphalt:	
ASTM D5	Penetration of Bituminous Materials
ASTM D36	Softening Point of Bitumen (Ring-and-Ball Apparatus)
ASTM D140/D140M1	Sampling Asphalt Materials
ASTM D546	Sieve Analysis of Mineral Filler
ASTM D979/D979M1	Sampling Bituminous Paving Mixtures
ASTM D1188	Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
ASTM D2041/D2041M	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2726/D2726M	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950	Nuclear Density of Asphalt
ASTM D2995	Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3203/D3203M	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3549/D3549M	Thickness or Height of Compacted Asphalt Mixture Specimens
	Sampling Compacted Bituminous Mixtures for Laboratory Testing
ASTM D5361/D5361M1	

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Test Method:	Test Description:
ASTM D6752/D6752M	Bulk Specific Gravity and Density of Compacted Asphalt MixturesUsing Vacuum Sealing
ASTM D6857	Maximum Specific Gravity and Density of Asphalt Mixtures using Automatic Vacuum Sealing Method
ASTM D6926	Preparation of Asphalt Mixture Specimens Using Marshall Apparatus
ASTM D6927	Marshall Stability and Flow of Asphalt Mixtures
ASTM D6951/D6951M ¹	Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
ASTM D7227	Rapid Drying of Compacted Asphalt Specimens Using VacuumDrying Apparatus
AASHTO R 47	Reducing Sample of HMA to Test Size
BS 1377 Part 9 Section 4 ¹	Methods of test for soils for civil engineering purposes Part 9: In-situ tests In-situ vertical deformation and strength tests
BS EN 1427	Bitumen and bituminous binders. Determination of the softening point. Ring and Ball method
Asphalt Mixtures:	
ASTM D70	Density of Semi-Solid Bituminous Materials (Pycnometer Method)
ASTM D2172	Quantitative Extraction of Asphalt Binder from Asphalt Mixtures
ASTM D2726, Clause 10.2	Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures (Determination of Bulk Density)
BS 598 Part 104, Section 4	Sampling and examination of bituminous mixtures for roads and other paved areas. Methods of test for the determination of density and compaction (Density and thickness of asphalt cores)
BS 598 Part 107	Sampling and examination of bituminous mixtures for roads andother paved areas. Method of test for the determination of the composition of design surface course rolled asphalt (Marshall stability and flow)
BS EN 1426; BS 2000-49	Bitumen and bituminous binders. Determination of needle penetration
BS EN 12697-1	Bituminous mixtures. Test methods for hot mix asphalt. Soluble binder content
BS EN 12697-5, Clause 9.3	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the maximum density
BS EN 12697-6,	Bituminous mixtures. Test methods for hot mix asphalt. Determination
Clauses 9.2 & 9.3	of bulk density of bituminous specimens
BS EN 12697-13	Bituminous mixtures. Test methods for hot mix asphalt. Temperature measurement
BS EN 12697-271	Bituminous mixtures. Test methods for hot mix asphalt. Sampling
BS EN 12697-29	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the dimensions of a bituminous specimen
BS EN 12697-30	Bituminous mixtures. Test methods for hot mix asphalt. Specimen preparation by impact compactor
BS EN 12697-34	Bituminous mixtures. Test methods for hot mix asphalt. Marshall Test (Marshall stability and flow)
BS EN 12697-36	Bituminous mixtures. Test methods for hot mix asphalt. Determination of the thickness of a bituminous pavement

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ISO / IEC: 17025 - 2017 Certificate

Test Method:	Test Description:
BS EN 12697 Part 28	Bituminous mixtures. Test methods for hot mix asphalt. Part 28: Preparation of samples for determining binder content, water content and grading
BS EN 12697 Part 2	Bituminous mixtures. Test method for hot mix asphaltPart 2: Determination of particle size distribution
BS EN 12697 Part 8	Bituminous mixtures. Test methods for hot mix asphalt Part 8: Determination of void characteristics of bituminous specimens
SOP/OPN/22 ¹	Surface Irregularities in Concrete & Bituminous Road Surfaces By Travelling Beam Device
Cement:	
ASTM C109/C109M	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or[50 mm] Cube Specimens)
ASTM C183/C183M1	Sampling and the Amount of Testing of Hydraulic Cement
ASTM C187	Amount of Water Required for Normal Consistency of HydraulicCemen Paste
ASTM C191	Time of Setting of Hydraulic Cement by Vicat Needle
BS EN 196 Part 3 +A1:2005	Methods of testing cement Part 3: Determination of setting times and soundness
BS EN 196 Part 6, Section 4.0	
Concrete:	
ASTM C31/C31M ¹	Making and Curing Concrete Test Specimens in the Field
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C42/C42M	Test Method for Obtaining and Testing Drilled Cores and SawedBeams of Concrete
ASTM C138/ C138M	Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C140/C140M1	Sampling and Testing Concrete Masonry Units and Related Units
ASTM C143/C143M1	Slump of Hydraulic-Cement Concrete
ASTM C172 ¹	Sampling of Freshly Mixed Concrete
ASTM C231/ C231M ¹	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C496/C496M	Splitting Tensile Strength of Cylindrical Concrete Specimens
ASTM C617/C617M	Capping Cylindrical Concrete Specimens
ASTM C642	Density, Absorption, and Voids in Hardened Concrete
ASTM C805/C805M ¹	Rebound Number of Hardened Concrete
ASTM C1064 ¹	Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1202	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration Rapid chloride permeability test (RCPT)
ASTM D4541 ¹	Pull-Off Strength of Coatings Using Portable Adhesion Testers
ASTM D7234 ¹	Pull-Off Adhesion Strength of Coatings on Concrete Using PortablePull- Off Adhesion Testers
ASTM E488 ¹	Strength of Anchors in Concrete Elements

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Test Method:	Test Description:
BS 1881, Parts 111, 114, and 116 ¹	Testing concrete. Part 111: Method of normal curing of test specimens (20°C method)Part 114: Testing concrete Methods for determination of density of hardened concrete Part 116: Method for determination of compressive strength of concrete cubes
BS 1881 Part 122	Testing concrete Part 122: Method for determination of water absorption
BS 1881 Part 208	Testing concrete Part 208: Recommendations for the determination ofth initial surface absorption of concrete
BS 8204-1: 2003	Screed test
BS 6717: 2001- Annex B	Annex B: Measurement of the dimensions of a single paving block
BS 6717: 2001- Annex E	Precast, unreinforced concrete paving blocks — Requirements and test methods Annex E: Method for measuring tensile splitting strength
BS EN 196-1	Determination of cement strength
BS EN 1367-4	Determination of drying shrinkage
BS EN 772-11/BS EN 771-3	Determination of Coefficient of Water Absorption due to Capillary Action of Masonry Units (And other related materials)
BS EN 1338 Annex E	Determination of Total Water Absorption of Paving Blocks
BS EN 1339 Annex E	Determination of Total Water Absorption of Paving Flags
BS EN 1340 Annex C	Measurement of Dimensions for Concrete Kerb Units
BS EN 1340 Annex E	Determination of Total Absorption of Concrete Kerb Units
BS EN 12350 Part 11	Testing fresh concrete. Part 1: Sampling
BS EN 12350 Part 21	Testing fresh concrete Part 2: Slump test
BS EN 12350 Part 51	Testing fresh concrete Part 5: Flow table test
BS EN 12350 Part 61	Testing fresh concrete Part 6: Density
BS EN 12350 Part 71	Testing fresh concrete Part 7: Air content. Pressure methods
BS EN 12390, Parts 1, 3, and 7	Testing hardened concrete Part 1: Shape, dimensions and other requirements for specimens and molds Part 3: Compressive strength of test specimensPart 7: Density of hardened concrete
BS EN 12390 Part 21	Testing hardened concrete Part 2: Making and curing specimens for strength tests
BS EN 12504 Part 11	Testing concrete in structures Part 1: Cored specimen- taking, examining and testing in compression
BS EN 12390 Part 8	Testing hardened concrete. Part 8: Depth of penetration of waterunder pressure
BS EN 13286-41	Determination of the Compressive Strength of Hydraulically Bound Mixtures
BS EN 13286-51	Method for the manufacture of test specimens of hydraulic bound mixtures u sing vibrating hammer compaction
BS EN 13748 Part 1 5.5/5.8	Water Absorption of Terrazzo Tiles
DIN 1048 Part 5	Testing Concrete; Testing of Hardened Concrete (specimens prepared in mold) Part 5: Water Permeability Test of Hardened Concrete
RILEM TC14 CPC 11.3	Absorption of Water by Concrete by Immersion Under Vacuum
NT Build 492-11	Chloride ion migration

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ISO / IEC: 17025 - 2017 Certificate

Test Method:	Test Description:
BS 6073 Appendix A	Precast concrete masonry units, measurement of dimension
BS 6073 Appendix B	Precast concrete masonry units, determination of compressive strength
BS 6717 Part 1 Ann. A & B	Precast concrete paving blocks
	Part 1: Determination of compressive strength
ASTM C1621	Passing Ability of Self-Consolidating Concrete by J-Ring1
ASTM C1252	Uncompacted Void Content of Fine Aggregate (as Influenced by Particle Shape, Surface Texture, and Grading)
BS EN 12350:9	Determining the V-funnel flow time for self-compacting concrete
BS EN 12350:10	Determining the passing ability ratio for self-compacting concrete using the L box test
ASTM C403	Time of Setting of Concrete Mixtures by Penetration Resistance
Geosynthetic:	
ASTM D570	Water Absorption of Plastics
ASTM D1004	Tear Resistance (Graves Tear) of Plastic Film and Sheeting
ASTM D 3767 (Procedures B& C)	Rubber - Measurement of Dimensions
ASTM D3787	Bursting Strength of Textiles -Constant rate of Transverse (CRT) Ball Burst Test
ASTM D5034	Breaking Strength and Elongation of Textile Fabrics (Grab Test).
ASTM D5035	Breaking Force and Elongation of Textile Fabrics (Strip Test).
ASTM D5199	Measuring the Nominal Thickness of Geosynthetics
ASTM E96/E96	Gravimetric determination of Water Vapor Transmission
ASTM E154/E154M	Water vapor Retarders used in contact with earth under concrete slabs on walls, or as ground cover
BS EN ISO 527 Part 3	Determination of Tensile Properties: Test conditions for films and sheets
BS EN ISO 5084	Determination Of Thickness of Textiles and Textile products
BS EN ISO 10319	Geosynthetics-wide width tensile test (Tensile strength and Elongation at Rupture)
BS EN ISO 11058	Water Permeability Charecteristics to the plane, without load
BS EN ISO 12236	Geosynthetics -static puncture test (CBR Test)
BS EN ISO 12956	Determination of Characteristics of Opening Size
BS EN ISO 13433	Dynamic Perforation Test (Cone Drop Test)
BS EN 1849-1	Flexible sheets for water proofing -Determination of thickness andmass per unit area of Bitumen sheets for roof water proofing
BS EN 1849-2	Flexible sheets for water proofing-Determination of thickness andmass per unit area -Plastic and Rubber sheets for waterproofing
BS EN 12127	Textile -Fabrics-Determination Of Mass Per Unit Area using small Samples
Road Markings:	
ASTM D711	No-Pick-Up Time of Traffic Paint
ASTM D 61321	Nondestructive Measurement of Dry a film Thickness of Applied Organic Coatings Using Ultrasonic Coating Thickness Gauge

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ISO / IEC: 17025 - 2017 Certificate

Test Method:	Test Description:
ASTM D7091 ¹	Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals
ASTM E1710	Measurement of Retroreflective Pavement Marking Materials with CENPrescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Measurement of the Luminance Coefficient under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
BS 3262 Part 3	Hot-applied thermoplastic road marking materials Part 3: Specification for application of material to road surfaces Determination of Thickness of Road Marking Materials
BS EN 1436 +A1	Road marking materials. Road marking performance for road users Determination of Skid Resistance
Solls:	
ASTM D854	Specific Gravity of Soil Solids by Water Pycnometer
ASTM D1140	Amount of Material in Soils Finer than No. 200 (75-m) Sieve
ASTM D1556 ¹	Density and Unit Weight of Soil in Place by Sand-Cone Method
ASTM D1557	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3))
ASTM D1883	CBR (California Bearing Ratio) of Laboratory- Compacted Soils
ASTM D2216	Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D4318	Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D44291 (2009a)	CBR (California Bearing Ratio) of Soils in Place
ASTM D4718	Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
ASTM D6913	Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
ASTM D6938 ¹	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
BS EN 933-8	Assessment of fines- sand equivalent
BS EN 933-9	Assessment of fines-methylene blue test
BS1377 Part 2 Clause 3	Methods of test for soils for civil engineering purposes Part 2: classification tests (Determination of moisture content)
BS 1377 Part 2 Clause 4.3	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of Liquid Limit (Cone Penetrometer))
BS 1377 Part 2 Section 4.5	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Atterberg Casagrande Method)
BS 1377 Part 2 Clauses 5.3 & 5.4	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of Plastic Limit and Plasticity Index)
BS 1377 Part 2 Clauses 9.2 & 9.3	Methods of test for soils for civil engineering purposes Part 2: Classification tests (Determination of particle size distribution)
BS 1377 Part 4 Clauses 3.5 and 3.6	Methods of test for soils for civil engineering purposes Part 4: Compaction-related tests (Determination of dry density / moisture content relationship)

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Test Method:	Test Description:
BS 1377 Part 4 Clause 7	Methods of test for soils for civil engineering purposes Part 4: Compaction-related tests (Determination of California bearing ratio)
BS 1377 Part 9 Clauses 2.1 & 2.2 ¹	Methods of test for soils for civil engineering purposes Part 9: In-situ tests (Sand replacement method suitable for fine, medium and coarse-grained soils (large and small pouringcylinder method)
BS 1377 Part 9 Clause 2.51	Methods for test for soils for civil engineering purposes Part 9: In-situ tests (Filed Density test by Nuclear Gauge FDT)
BS 1377 Part 9 Section 4.3 ¹	Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of the in-situ California Bearing Ratio (CBR)
BS EN 13036-7	Irregularity Measurement of a Pavement Courses by Using a Straightedge
ASTM E1703/E1703M	Measuring Rut-Depth of Pavement Surfaces using a Straightedge
BS 1377 Part 9 Clauses 2.1 & 2.2 ¹	Methods of test for soils for civil engineering purposes Part 9: In-situ tests (Sand replacement method suitable for fine, medium and coarse-grained soils (large and small pouringcylinder method)
BS 1377 Part 9 Clause 2.51	Methods for test for soils for civil engineering purposes Part 9: In-situ tests (Filed Density test by Nuclear Gauge FDT)
BS 1377 Part 9 Section 4.3 ¹	Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of the in-situ California Bearing Ratio (CBR)
BS EN 13036-7	Irregularity Measurement of a Pavement Courses by Using a Straightedge

SPECIFICATION

General requirements, sampling, sample preparation and test on materials before stabilization

¹ This laboratory performs field testing activities for these tests.

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Accredited Laboratory

A2LA has accredited

AL BARAHA TECHNICAL LABORATORIES

Doha, Qatar

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system [refer to joint ISO-ILAC-IAF Communiqué dated April 2017].



Presented this 22nd day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 4881.02

Valid to December 31, 2024

For the fests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.



ISO / IEC: 17025 - 2017 Certificate



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AL BARAHA TECHNICAL LABORATORIES Zone 57, Street No.558, Building No. 47 Salwa Industrial Area Doha, Qatar 40572 Tareq Hani Abdallah Phone: +00974 55743879

CHEMICAL

Valid To: December 31, 2024

Certificate Number: 4881.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for:

Test Method:	Test Description:
Aggregate:	
ASTM C40/C40M	Organic Impurities in Fine Aggregates for Concrete
ASTM C494/C494M	Chemical Admixtures for Concrete
ASTM D891	Specific Gravity, Apparent, of Liquid Industrial Chemicals
BS 812 Part 117 Appendix C	Testing aggregates. Method for determination of acid-soluble chloride salts
BS 812 Part 118 Clause 6	Testing aggregates. Methods for determination of Sulfate content
BS EN 1744-1+A1 Clause 12	Tests for chemical properties of aggregates. Chemical analysis Determination of Acid Soluble Sulfate in Aggregates
BS EN 1744-5	Tests for chemical properties of aggregates. Determination of acid soluble chloride salts
Cement:	
BS EN 196 Part 2, Clause 4.4.1	Method of testing cement: Part 2: Chemical analysis of cement - Loss on ignition
BS EN 196 Part 2, Clause 4.4.3	Method of testing cement: Part 2: Chemical analysis of cement - Insoluble residue
BS EN 196 Part 2, Clause 4.5.5	Method of testing cement: Part 2: Chemical analysis of cement - Impure silica
BS EN 196 Part 2, Clause 4.5.6	Method of testing cement: Part 2: Chemical analysis of cement - Pure silica
BS EN 196 Part 2, Clause 4.5.14	Method of testing cement Part 2: Chemical analysis of cement - Calcium Oxide
BS EN 196 Part 2, Clause 4.5.11	Method of testing cement Part 2: Chemical analysis of cement - Aluminum Oxide
BS EN 196 Part 2, Clause 4.5.10	Method of testing cement Part 2: Chemical analysis of cement - Iron Oxide
BS EN 196 Part 2, Clause 4.5.15	Method of testing cement Part 2: Chemical analysis of cement - Magnesium oxide
BS 1881 Part 124, Clause 12.2	Testing concrete Part 124: Methods for analysis of hardened concrete (Determination of Sulphate content in hardened concrete)
BS 1881 Part 124, Clause 12.1	Testing concrete Part 124: Methods for analysis of hardened concrete (Determination of Chloride content in hardened concrete)

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5202 Presidents Court, Suite 220 | Frederick, MD 21703-8398 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2



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Test Method:	Test Description:
BS EN 196 Part 2 4.4.2	Method of testing cement Part 2: Chemical analysis of cement - Sulphate
BS EN 196 Part 2 4.5.16	Method of testing cement Part 2: Chemical analysis of cement - Chloride
ASTM C1218	Water Soluble Chloride in mortar and concrete
ASTM C1152/C1152M	Acid Soluble Chloride in mortar and concrete
Soft:	CONTRACTOR OF THE CONTRACTOR O
BS 1377 Part 3, Clause 7.9 5.2:1990	Methods of test for soils for civil engineering purposes. Chemical and electro-chemical tests (Determination of acid soluble sulfate content)
BS 1377 Part 3, Clause 9.3	Methods of test for soils for civil engineering purposes. Chemical and electro-chemical tests (Determination of acid soluble chloride content)
BS 1377 Part 3, Clause 12	Methods of test for soils for civil engineering purposes. Chemical and electro-chemical tests (pH value)
BS 1377 Part 3, Clause 4.0	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests: Determination of the organic matter content Clause 3
BS 1377 Part 3, Clause 8.3	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of Carbonate Content
BS 1377 Part 3, Clause 9.2	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of Water Soluble Chloride Content of Soil
BS 1377 Part 3, Clause 7.6 5.3/5.5:1990	Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests (Determination of the sulphate content of soil and ground water) Determination of Water Soluble Sulphate Content of Soil
Admixtures:	
BS EN 480 Part 10 Clause 4	Admixtures for concrete, mortar and grout. Test methods. Reference concrete and reference mortar for testing Chloride Content of Admixture
Water/Waste Water:	
APHA 4500 H +B	pH
APHA 2510 B	Electrical Conductivity
APHA 2540 C	Total Dissolved Solids at 180 ° C.
APHA 2540 D	Water -Total Suspended Solids
APHA 2540 B	Water -Total Solids
APHA 2540 F	Determination of Settle able solids of water
APHA 5220 D	Chemical Oxygen Demand
APHA 2320 B	Alkalinity, Carbonate, Bicarbonate, Hydroxide Alkalinity
SOP/OPN/28	Sampling
APHA 2130 B	Turbidity

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Test Method:	Test Description:
HACH Method 8038 (Adapted method of APHA 4500 NH ₃ B & C)	Nitrogen-Ammonia
HACH Method 8039	Nitrogen-Nitrate
HACH Method 8021 (Adapted method of APHA 4500 Cl G)	Chlorine
APHA 4500 Cl -B	Chloride
HACH Method 8048 (Adapted method of APHA 4500 -P E)	Phosphorus
APHA 4500 SO4 2-C	Sulphate
HACH Method 8008 (Adapted method of APHA 3500-Fe B)	Iron
APHA 2340 C	Hardness
APHA 3500-Mg B	Magnesium
APHA 3500-Ca B	Calcium
HACH Method 8506 (Adapted method of APHA 3500-Cu C)	Copper
APHA 3120-B	Boron Barium Sodium Potassium Iron Aluminum Lead Cadmium Chromium Copper Nickel Lithium Zinc Manganese Silver Cobalt Magnesium Calcium Beryllium Antimony Silicon Molybdenum Selenium Thallium Titanium Vanadium Phosphorous Tin

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MOE Certificate



REGISTRATION CERTIFICATE

شهادة تسجيل مختبر خاص

وقفاً للائحة الصادرة بقرار وزير البلدية والبيئة رقم (٢٥٢) لسنة ٢٠١٧م According to the Ministerial Decree No. (356)/2017

RL019-19

Date of Issue:

31/10/2023

تاريخ اصدار الشهادة:

Date of Expiry:

30/10/2024

الصلاحية حتى:

Lab Name:

Address:

مختبرات البراحة القنية Al Baraha Technical Laboratories اسم المختير:

منطقة ٥٧، شارع ٥٥٨، ميني ٤٧، المنطقة الصناعية، ص.ب: ٢٠٥٧٢،

الدوحة – قطر

العنوان:

Zone 57, Street 558, Building 47, Industrial Area, P.O.Box:40572,

Doha-Qatar

CR No:

REGISTRATION CERTIFICATE

90127

رقم السجل التجاري:

Activity:

Testing (Material)

النشاط:

Scope of Registration: Attached Scope of accreditation No:

4881.01 4881.02 مرقق مجال الاعتماد مجال التسجيل: شهادة رقم:

Notes:

- QS has no any responsibility for poor performance by this lab during the validity period.
 This certificate will remain valid for the period specified, subject to compliance with the Technical Regulations.

This certificate is invalid without the attached scope of accreditation

It is important to apply two months before expiry date of validity for renewal of this conformity certificate.
 The required fee for this certificate has been stated according to the decision No. (112)/2019

PRESEDENT, QGOS





Commercial Registration





Commercial Registration



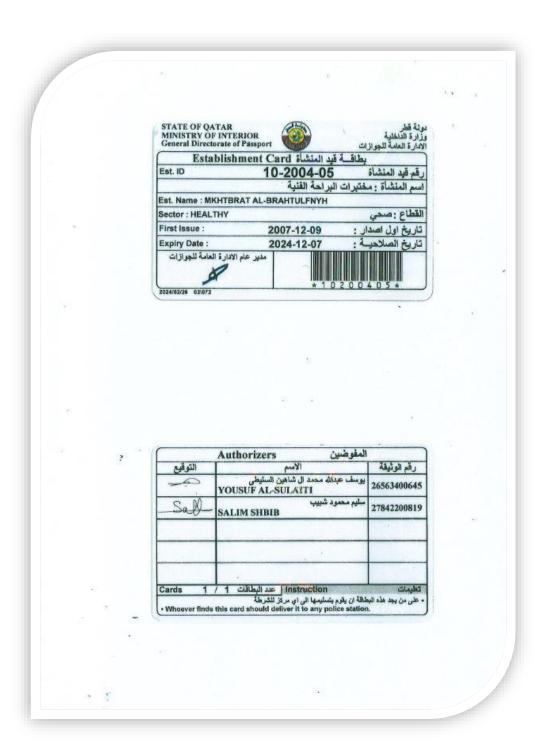


Commercial Registration





Computer Card





Qatar Chamber of Commerce & Industry Membership Certificate





Our ULTIMATE GOAL is to achieve "TOTAL CUSTOMER SATISFACTION"



BATLABs is

"YOUR DEPENDABLE PROJECT PARTNER"