



مختبرات عروس الشمال للدراسات الهندسية

Arous Al-Shamal Laboratories for Engineering Studies

Company Profile

A specialist laboratory for construction materials testing — concrete and concrete products, aggregates, asphalt and soils — in our laboratory and on site.

Concrete Testing

Concrete Products

Aggregates

Asphalt

Soil



INTRODUCTION

A Word from Our Management

Dear Sir / Madam,

It is our pleasure to introduce Arous Al-Shamal Laboratories for Engineering Studies, a specialist construction materials testing laboratory based in Irbid, serving projects across northern Jordan and throughout the Kingdom.

Our work covers concrete and concrete products, aggregates, asphalt and soils. We test in our own laboratory and on site, through a dedicated field team.

Every test we perform follows recognised standards — ASTM, AASHTO, BS EN and the Jordanian Standards — and written quality procedures govern our documents, records and sample traceability. Each report carries a unique reference number and a QR code, so its authenticity can be verified online at verify.arouslabs.com.

We place our expertise at your service and look forward to becoming your trusted partner in assuring the quality of your projects.

Yours sincerely,

Eng. Amjad Abdelrahim

General Manager

42+

Years of experience, most senior of the
team

5

Core testing disciplines

20+

Major projects the team has worked on

Our vision

To be the most trusted construction materials laboratory in northern Jordan.

Our mission

To deliver accurate, impartial and timely results that help engineers, contractors and owners make the right decisions.

Our values

Accuracy · Impartiality ·
Responsiveness · Client
confidentiality · Continual
improvement



THE TEAM & ITS EXPERIENCE

A new laboratory, in hands that are not new

The areas of experience below were gained by our staff while working with other firms, in Jordan, Saudi Arabia, the UAE and Qatar.

Eng. Amjad Jad-Alleh Ahmad Abdelrahim General Manager — Head of Specialty

Geotechnical Engineer · Head of Materials and Head of Soil Mechanics specialization certificates, Jordanian Engineers Association

In materials testing and quality control since 1988

Roads, bridges and interchanges

Railways

Airports and airbases

Industrial plants

Buildings and urban development

Heritage site restoration

Eng. Ali Mohammad Almansi Laboratory Manager — Assistant Head of Specialty

Civil Engineer — Materials Engineer · concrete and asphalt mix design and materials quality control

In materials engineering since 1984

Highways and expressways

Interchanges and bridges

Railways

Tunnelling

High-rise buildings

Mix design

Mohammad Amjad Abdulraheem Technical Manager

HND in Construction and the Built Environment — Civil Engineering (Pearson BTEC Level 5)

In materials laboratories since 2008

Water supply and conveyor lines

Schools and buildings

Compaction layers and earthworks

Concrete testing

QC of delivered materials

Who works in the lab

Civil and materials engineers

Qualified laboratory technicians

Field technicians and samplers

Quality and document control officer

Calibration and equipment officer

Reception, administration and finance staff



SERVICES

What We Do

We test construction materials for public and private projects: concrete and concrete products, aggregates, asphalt and soils — backed by a field team for sampling and in-situ testing.

01

Concrete Testing

Fresh concrete tested on site and hardened concrete in the laboratory, to confirm that what is placed meets the grade specified in the design.

02

Concrete Products

Masonry blocks, hollow slab blocks, kerbs, tiles and interlock paving: strength, density, dimensions and absorption, to Jordanian and international standards.

03

Aggregates

Aggregates used in concrete, asphalt mixtures and base courses.

04

Asphalt

Plant-produced mixtures and finished pavement layers — binder content, gradation, density and compaction against project requirements.

05

Soil

Fill, base and subbase materials and road subgrades — from classification through to verifying compaction on site.

+

Pre-purchase inspection

Water lines & leak detection · Paint & finishes · Reinforcement steel · Full building inspection

Field services

A dedicated field team for sampling and in-situ testing.

- On-site concrete sampling and cube casting
- Field density by the sand-cone method
- Rebound hammer and ultrasonic pulse velocity
- Slump and temperature of fresh concrete
- Concrete and asphalt core extraction
- Asphalt layer thickness and degree of compaction

ON SITE



Sampling the asphalt mix behind the paver



Mix temperature at laydown



Field density by the sand cone



Casting concrete cubes on site



HOW WE WORK

A sample's journey through the lab

Documented procedures applied to every sample, from the moment it arrives to the moment its report is issued.

1

Sample receipt

Each sample is logged under a unique reference and stored under proper conditions.

2

Testing

On calibrated equipment, to the specified standard.

3

Technical review

Results are checked and approved by the responsible engineer.

4

Reporting

A signed report with a unique reference number and a QR code for online verification.



Who we serve

Contractors

Engineering consultants

Government ministries and departments

Municipalities

Ready-mix concrete plants

Housing companies and developers

Block and precast manufacturers

Quarries and aggregate suppliers

Project owners and individuals



TESTS AND STANDARDS

Concrete Testing

Fresh concrete tested on site and hardened concrete in the laboratory, to confirm that what is placed meets the grade specified in the design.

Test	Standard
Fresh concrete	
Sampling of fresh concrete	BS EN 12350-1 · ASTM C172
Slump test	BS EN 12350-2 · ASTM C143
Temperature of fresh concrete	ASTM C1064
Density (unit weight)	BS EN 12350-6 · ASTM C138
Air content — pressure method	BS EN 12350-7 · ASTM C231
Making and curing test specimens	BS EN 12390-2 · ASTM C31
Hardened concrete	
Compressive strength of cubes	BS EN 12390-3
Compressive strength of cylinders	ASTM C39
Density of hardened concrete	BS EN 12390-7
Drilled cores — extraction and testing	ASTM C42 · BS EN 12504-1
Rebound number — Schmidt hammer	ASTM C805 · BS EN 12504-2
Ultrasonic pulse velocity	ASTM C597 · BS EN 12504-4
Flexural strength	ASTM C78 · BS EN 12390-5
Splitting tensile strength	ASTM C496 · BS EN 12390-6
Water absorption	BS 1881-122
Mix design	
Concrete mix design and trial mixes	ACI 211.1

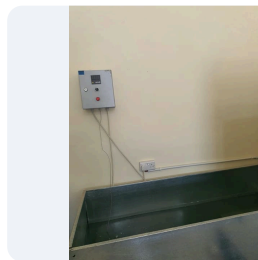
EQUIPMENT USED



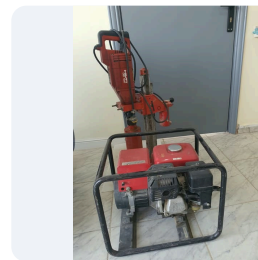
Digital compression testing machine



Slump cone and tamping rod



Temperature-controlled curing tank



Core drilling rig

JS = Jordanian Standard. The current edition of each standard applies, or any specification set by the project.



TESTS AND STANDARDS

Concrete Products

Masonry blocks, hollow slab blocks, kerbs, tiles and interlock paving: strength, density, dimensions and absorption, to Jordanian and international standards.

Test	Standard
Concrete masonry blocks — strength, density, dimensions	JS 276 · ASTM C140
Hollow slab blocks — strength, density, dimensions	JS 944 · ASTM C140
Precast concrete kerbs — bending strength, absorption	JS 479 · BS EN 1340
Cement terrazzo tiles — bending, absorption, dimensions	JS 45
Concrete paving blocks (interlock) — strength, absorption	BS EN 1338 · ASTM C936

Aggregates

Aggregates used in concrete, asphalt mixtures and base courses.

Test	Standard
Sieve analysis of fine and coarse aggregates	ASTM C136
Material finer than No. 200 sieve by washing	ASTM C117
Specific gravity and absorption — coarse aggregate	ASTM C127
Specific gravity and absorption — fine aggregate	ASTM C128
Los Angeles abrasion	ASTM C131
Soundness — sodium / magnesium sulfate	ASTM C88
Sand equivalent	ASTM D2419
Flakiness and elongation indices	BS 812-105 · ASTM D4791
Clay lumps and friable particles	ASTM C142
Bulk density and voids	ASTM C29
Sulfate and chloride content	BS EN 1744-1

EQUIPMENT USED



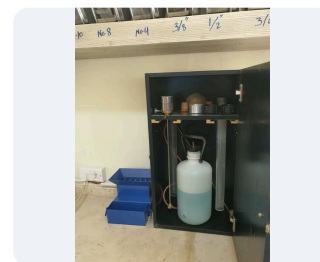
Los Angeles abrasion machine



Standard test sieves



Flakiness gauge



Sand equivalent apparatus

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TESTS AND STANDARDS

Asphalt

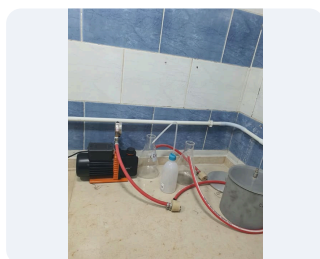
Plant-produced mixtures and finished pavement layers — binder content, gradation, density and compaction against project requirements.

Test	Standard
Asphalt mixtures	
Marshall mix design	Asphalt Institute MS-2
Marshall stability and flow	ASTM D6927
Bulk specific gravity of compacted mixtures	ASTM D2726
Theoretical maximum specific gravity (GMM)	ASTM D2041
Percent air voids	ASTM D3203
Binder content by centrifuge extraction	ASTM D2172
Gradation of extracted aggregate	ASTM D5444
Paved layers	
Coring of asphalt pavement	ASTM D5361
Thickness of compacted specimens	ASTM D3549
Degree of field compaction	ASTM D2726 · D2041

EQUIPMENT USED



Centrifuge extractor



GMM apparatus: vacuum pump and container



Automatic compactors: Marshall and Proctor



Water bath for Marshall specimens

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TESTS AND STANDARDS

Soil

Fill, base and subbase materials and road subgrades — from classification through to verifying compaction on site.

Test	Standard
Physical properties & classification	
Water (moisture) content	ASTM D2216
Atterberg limits — LL, PL, PI	ASTM D4318
Particle-size analysis by sieving	ASTM D6913
Hydrometer analysis	ASTM D7928
Soil classification — USCS / AASHTO	ASTM D2487 · AASHTO M145
Specific gravity of soil solids	ASTM D854
Sand equivalent	ASTM D2419
Compaction & bearing	
Standard Proctor compaction	ASTM D698
Modified Proctor compaction	ASTM D1557
California Bearing Ratio (CBR) — laboratory	ASTM D1883
Field density — sand-cone method	ASTM D1556
Chemical tests	
pH of soil	ASTM D4972
Organic content — loss on ignition	AASHTO T267
Sulfate and chloride content	BS 1377-3

EQUIPMENT USED



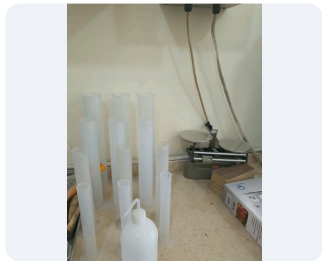
Sand-cone apparatus — field density



Casagrande liquid limit device



Automatic compactors: Proctor and Marshall



Hydrometer analysis cylinders

Our field team tests the density of every layer before it is approved, and reports promptly so work on site is never held up.

JS = Jordanian Standard. The current edition of each standard applies, or any specification set by the project.



ABOUT US

Quality & Organization

A documented quality system

Written quality procedures for document control and records, tracing every sample from receipt to report.

Scheduled calibration

A scheduled calibration programme for all testing and measuring equipment, with a full record kept for every instrument.

Recognised standards

ASTM, AASHTO, BS EN, BS and the Jordanian Standards — or any specification set by the project.

Verifiable reports

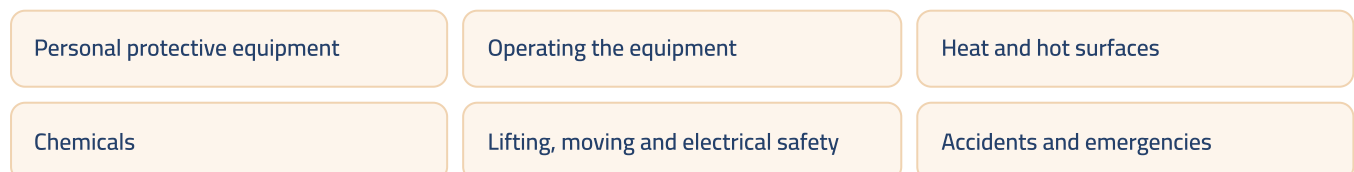
Every report carries a unique reference number and a QR code that opens its verification page on verify.arouslabs.com, showing the original report exactly as issued.

How We Are Organized



Health & Safety

Accuracy never justifies a risk



The above is taken from procedure QP-03 of the quality manual submitted with our accreditation file. The laboratory does not yet hold a safety management system certificate such as ISO 45001 — this is a practised commitment, not a claim of accreditation.



CONTACT US

Ready to receive your samples

To request a test, a quotation or a site visit for sampling, contact us any time during working hours.

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**Arous Al-Shamal Laboratories for Engineering Studies****Precise Results. Confident Construction.**