



QESTLab

United States Test Methods

Electronic Worksheets are screens that conform to an ASTM, AASHTO, State Authority or other test method. They collect all the information required by the method, perform calculations and checks according to the method.

QESTLab™ is not restricted to the methods detailed in this list. The Electronic Worksheets outlined here are those that have already been developed for the QESTLab™ system.

New Electronic Worksheets can be quickly developed as a need arises. If you are interested in any test methods not shown in this list, please contact Spectra QEST at www.spectraquest.com.

This list of test methods is based on QESTLab v3.3

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M 145 – 91 Classification of Soils and Soil Aggregates
AASHTO T 11 - 05, Finer than 75µm
AASHTO T 19 - 00 Bulk Density ("Unit Weight") and Voids
AASHTO T 21 - 05 Organic Impurities
AASHTO T 27 - 06 Sieve Analysis
AASHTO T 27 - 06 Sieve Analysis with Wash
AASHTO T 30 - 07 Mechanical Size Analysis of Extracted Aggregate
AASHTO T 84 - 08 Specific Gravity of Fine Aggregate
AASHTO T 85 - 08 Specific Gravity of Coarse Aggregate
AASHTO T 88 - 00 Particle Size Analysis of Soils
AASHTO T 89 - 02 Atterberg Limits
AASHTO T 90 - 00 Atterberg Limits
AASHTO T 96 - 02 Los Angeles Abrasion Value
AASHTO T 99 - 01 Proctor - Standard
AASHTO T 100 - 06 Specific Gravity of Soils
AASHTO T 104 - 99 Sodium Sulfate Soundness
AASHTO T 112 - 00 Clay Lumps and Friable Particles
AASHTO T 113 - 06 Chert Particles
AASHTO T 113 - 06 Lightweight Particles
AASHTO T 164 - 06 Asphalt Content
AASHTO T 166 - 07 Bulk Specific Gravity of Asphalt
AASHTO T 166 - 07 Bulk Specific Gravity of Asphalt
AASHTO T 166 - 07 Bulk Specific Gravity of Asphalt (Gyratory)
AASHTO T 166 - 07 Bulk Specific Gravity of Asphalt (Marshall)
AASHTO T 176 - 08 Sand Equivalent
AASHTO T 180 - 01 Proctor - Modified
AASHTO T 190 - 02 R Value of Compacted Soils
AASHTO T 193 - 99 California Bearing Ratio
AASHTO T 196 - 05 Air Content Of Concrete
AASHTO T 209 - 05 Rice Specific Gravity
AASHTO T 245 - 97 Marshall Stability
AASHTO T 246 - 07 Hveem Stability

AASHTO T 255 – 00 Moisture Content
AASHTO T 269 - 97 Air Voids
AASHTO T 275 - 07 Bulk SG of Coated Specimens
AASHTO T 283 - 07 Moisture Susceptibility
AASHTO T 304 - 08 Uncompacted Void Content
AASHTO T 308 - 05 Asphalt Binder Content by Ignition Method
AASHTO T 330 - 07* Methylene Blue Value
AASHTO TP 57 - 04* Methylene Blue Value
AASHTO TP 63 - 03 APA Rut Test

American Public Health Association (APHA)

APHA 2130B * Turbidity In Water
APHA 2540B * Total Solids
APHA 2540C * Total Dissolved Solids
APHA 2540D * Non Filterable Residue
APHA 4500H * pH Determination In Water

ASTM International

ASTM C 29 - 07 Bulk Density ("Unit Weight") and Voids
ASTM C 39 - 05 Concrete Sample
ASTM C 39 - 05 Grout Sample
ASTM C 39 - 05 Mortar Sample
ASTM C 39 - 05 / C 78 - 07 / C 109 - 07 / C 1019 - 07 Concrete Samples
ASTM C 40 - 04 Organic Impurities
ASTM C 42 - 04 Concrete Sample
ASTM C 78 - 07 Concrete Sample
ASTM C 88 - 05 Sodium Sulfate Soundness
ASTM C 109 - 07 Mortar Sample
ASTM C 117 - 05 Finer than 75µm
ASTM C 123 - 03 Chert Particles
ASTM C 123 - 03 Lightweight Particles
ASTM C 123 - 03 * Lightweight Particles in Aggregate
ASTM C 127 - 07 Specific Gravity of Coarse Aggregate
ASTM C 128 - 07 Specific Gravity of Fine Aggregate
ASTM C 131 - 06 Los Angeles Abrasion Value
ASTM C 136 - 06 Sieve Analysis
ASTM C 136 - 06 Sieve Analysis with Wash (Metric)
ASTM C 136 - 06 MDOT Sieve Analysis with Wash and Dust
ASTM C 136 - 06, ASTM C 117 - 04, Sieve Analysis with Wash
ASTM C 142 - 04 Clay Lumps and Friable Particles
ASTM C 173/C 173M - 07 Air Content Of Concrete
ASTM C 174 - 06 Drilled Core Thickness
ASTM C 469 / BS 881 Part 12 Modulus of Elasticity
ASTM C 495 - 07 Concrete Sample (Light Weight)
ASTM C 496 - 04 Concrete Sample
ASTM C 535 - 03 LA Abrasion
ASTM C 566 - 97 Moisture Content
ASTM C 805 - 02 Concrete Rebound
ASTM C 873 Creation of Cippoccs
ASTM C 1019 - 07 Grout Sample
ASTM C 1074 - 04 Concrete Strength Estimation (Maturity)
ASTM C 1202 – 97 * Rapid Chloride Permiability
ASTM C 1252 - 06 Uncompacted Void Content

ASTM C 1293 - 06 * Alkali Reactivity
ASTM C 1293 - 06 * Alkali Reactivity (CSIRO Modified)
ASTM C 1293 - 06 * Concrete Prisms Test for AAR
ASTM C 1314 - 07 Masonry Prism Sample
ASTM C 1604 - 05 Concrete Sample
ASTM D 5 - 06 Penetration of Bituminous Materials
ASTM D 36 - 06 Softening Point of Bitumen
ASTM D 244-21 1-D Asphalt Residue (Evaporation Only)
ASTM D 422 - 07 Particle Size Analysis of Soils
ASTM D 558 - 04 Testing of Soil-Cement Mixtures
ASTM D 559 - 03, ASTM D 1633 - 07 Compressive Strength of Soil-Cement Cylinders
ASTM D 698 - 07 Proctor - Standard
ASTM D 854 - 06 Specific Gravity of Soils
ASTM D 1140 - 06 Materials Finer Than 75µm Sieve
ASTM D 1188 - 07 Bulk SG of Coated Specimens
ASTM D 1556 - 07 Field Density Sand Replacement
ASTM D 1557 - 07 Proctor - Modified
ASTM D 1559 - 89 Marshall Stability
ASTM D 1560 - 05 Hveem Stability
ASTM D 1632 - 07, ASTM D 1633 - 00 Compressive Strength of Soil-Cement Cylinders
ASTM D 1633 - 00, ASTM D 1632 - 07 Compressive Strength of Soil-Cement Cylinders
ASTM D 1883 - 07 California Bearing Ratio
ASTM D 2041 - 03 Max Specific Gravity and Density of Asphalt
ASTM D 2041 - 03a RICE Specific Gravity
ASTM D 2166 - 06 Unconfined Compressive Strength of Cohesive Soil
ASTM D 2170 - 06 Kinematic Viscosity of Asphalts
ASTM D 2172 - 05 Asphalt Content
ASTM D 2172 - 05 Bitumen Content
ASTM D 2172 - 05 MDOT Asphalt Content
ASTM D 2172 - 05, AS 1141.11 Aggregate Grading
ASTM D 2196 - 05 Method A Brookfield Viscosity of Emulsion (Method A & Torque)
ASTM D 2216 - 05 Moisture Content and Dry Density (Imperial and Metric)
ASTM D 2419 - 02 Sand Equivalent
ASTM D 2434 - 06 Permeability of Granular Soils (Constant Head)
ASTM D 2435 - 04 Load Deformation Properties
ASTM D 2435 - 04 One-Dimensional Consolidation (Loading, Reloading)
ASTM D 2435 - 04 Time Deformation Properties
ASTM D 2487 - 06 Unified Soil Classification System
ASTM D 2488 - 06 Visual-Manual Identification of Soils
ASTM D 2726 - 05a Bulk Specific Gravity of Asphalt (and Gyrotory, Marshall)
ASTM D 2726 - 05a, 3203 - 05 Bulk Specific Gravity and Air Voids of Asphalt (Metric)
ASTM D 2844 - 07 R Value of Compacted Soils
ASTM D 2922 - 05, 3017 - 05 Nuclear Field Density
ASTM D 2950 - 05 Asphalt Density by Nuclear Method
ASTM D 2974 - 07 Moisture, Ash and Organic Content
ASTM D 3017 - 05, D 2922 - 05 Nuclear Field Density
ASTM D 3203 - 05 Air Voids
ASTM D 3549 - 03, D 6927 - 06, D 6926 - 04, D 2726 - 05a Height, Marshall Stability and Flow of Compacted Asphalt
ASTM D 4318 - 05 Atterberg Limits
ASTM D 4402 - 06 Brookfield Viscosity of Asphalt (& Torque)
ASTM D 4546 - 03 Swell (CCBD)
ASTM D 4791 - 05 Flat and Elongated Particles

ASTM D 4867 - 06 Moisture Susceptibility (also Metric)
ASTM D 5084 - 03 Hydraulic Conductivity (Remolded and Undisturbed, Method C only)
ASTM D 5444 - 05 Mechanical Size Analysis of Extracted Aggregate
ASTM D 5821 - 06 * Fractured Faces
ASTM D 6307 - 05 Asphalt Content (incl. Ignition Oven Calibration)
ASTM D 6752 - 03 Bulk SG & Density of Sealed Specimens
ASTM D 6926 - 04, ASTM D 6927 - 06, D 3549 - 03, D 2726 - 05a Height, Marshall Stability and Flow of Compacted Asphalt
ASTM D 6927 - 06, D 6926 - 04, D 3549 - 03, D 2726 - 05a Height, Marshall Stability and Flow of Compacted Asphalt
ASTM F 1869 - 04 Moisture Vapor Emission Rate
ASTM PS 131 - 01 Bulk SG of Coated Specimens

American Water Works Association (AWWA)

AWWA 3500, 4500E, 4500C-B, 2540C * Water Soluble Salt Analysis

Minnesota Department of Transport (MnDOT)

MnDOT 1205 - 05 Sieve Analysis with Wash
MnDOT 1203 - 05 Mechanical Size Analysis of Extracted Aggregate
MnDOT 1204 - 02 Specific Gravity of Coarse Aggregate
MnDOT 1205 - 02 Specific Gravity of Fine Aggregate
MnDOT 1206 - 00 Uncompacted Void Content
MnDOT 1207 - 05 Chert Particles
MnDOT 1207 - 05 Lightweight Particles
MnDOT 1209 Spall Lithological Summary
MnDOT 1210 - 05 LA Abrasion
MnDOT 1211 - 05 Bulk Density ("Unit Weight") and Voids
MnDOT 1212 - 00 Organic Impurities
MnDOT 1215 - 00 Sand Equivalent
MnDOT 1305 - Create Standard Proctor
MnDOT 1307 - 95 R Value of Compacted Soils
MnDOT 1805 - 02 Marshall Stability
MnDOT 1806 - 05 Bulk Specific Gravity of Asphalt
MnDOT 1806 - 05 Bulk Specific Gravity of Asphalt (Gyratory)
MnDOT 1806 - 05 Bulk Specific Gravity of Asphalt (Marshall)
MnDOT 1807 - 01 Rice Specific Gravity
MnDOT 1808 - 00 Air Voids
MnDOT 1816 - 03 Bulk Specific Gravity Using Corelok
MnDOT 1852 - 05 Asphalt Content by Centrifuge Extraction
MnDOT 1853 - 07 Asphalt Binder Content by Ignition Method

Nevada Department of Transport (NDOT)

NDOT T 101E Harvard Miniature
NDOT T 111 - 00 Specific Gravity of Coarse Aggregate
NDOT T 115 - 02 R Value of Compacted Soils
NDOT T 206 - 05 Sieve Analysis
NDOT T 210/T 211/T 212 - 00 Atterberg Limits
NDOT T 227 - 02 Sand Equivalent
NDOT T 228 * Cleanness Value
NDOT T 230 * Fractured Faces
NDOT T 233 * Los Angeles Value
NDOT T 324 - 05 RICE Specific Gravity
NDOT T 333 - 05a Bulk Specific Gravity of Asphalt

NDOT T 341 - 97 Moisture Susceptibility
NDOT T 431 - 07 Air Content Of Concrete
NDOT T 470 - 99 Sodium Sulfate Soundness
NDOT T 485 * Los Angeles Value
NDOT T 724 - 06 Asphalt Content
NDOT T 761 - 05 Asphalt Content
NDOT T 761 - 05 Ignition Oven Calibration

Texas Department of Transportation (TxDOT)

Tex-101-E Part III Particle Size Analysis
Tex-103-E Moisture Content of Aggregates
Tex-104-6 Atterberg Limits
Tex-107-E Bar Linear Shrinkage
Tex-110-E Particle Size Analysis
Tex-111-E Determination of Amount of Material in Soils Finer than the 75 um (No. 200) Sieve
Tex-112-E Admixing lime to reduce plasticity index of soils
Tex-113-E Moisture Density Relations of Base Material and Coheisonless Sands
Tex-114-E Moisture Density Relations of Sub Grade & Embankment Soils
Tex-115-1 Nuclear Density and Moisture Determination
Tex-116-E Resistance to Degradation by Wet Ball Mill Method
Tex-117-E Triaxial Compression Tests
Tex-120-E Soil Cement - Soil Lime Testing
Tex-121-2 Soil lime Testing
Tex-126-E Density of Asphalt Stabilized Base
Tex-128-E Determining pH of Soil
Tex-129-E Measuring Resistivity of Soils
Tex-140-E Measuring Thickness of Pavement Layer
Tex-200-F Sieve Analysis of Non Surface Treatment Aggregates
Tex-200-ST Sieve Analysis of Surface Treatment Aggregates
Tex-203-F Sand Equivalent
Tex-207-FPL Placement Density
Tex-208-F Test for stabilometer value of bituminous mixtures
Tex-210-F Determining asphalt content of bituminous mixtures by extraction
Tex-217-F Deleterious Material and Verification of Coarse Aggregate
Tex-224-F Determining of Flakiness Index
Tex-235-F Determining Drain Down Characteristics of Bituminous Material
Tex-401-2 Sieve Analysis for Fine and coarse Aggregate
Tex-403-A Saturated surface-dry specific gravity and absorption of aggregates
Tex-404-A Determining unit mass (weight) of aggregates
Tex-406-A Decantation Test for Concrete Aggregate
Tex-408-A Organic Impurities in Fine Aggregates for Concrete
Tex-409-A Free moisture and water absorption in aggregate for concrete
Tex-410-A Resistance to Degradation by Abrasion and Impact in LA Machine
Tex-411-M Magnesium Sulfate Soundness
Tex-412-A Lightweight pieces in aggregate
Tex-413-A Deleterious Material
Tex-423-A Determining Pavement Thickness by Direct Measurement
Tex-424-A Testing of Drilled Cores for Portland Cement Concrete
Tex-424-A Testing of Drilled Cores for Portland Cement Concrete
Tex-448-A Concrete sample - Beams
Tex-460-A Coarse Aggregate Angularity by Fractured Face Count
Tex-530-C Effect of Water on Bituminous Paving Mixtures (Boiling & Stripping)
Tex-600-J Sampling and Testing Hydrated Lime, Quicklime, and Commercial Lime Slurry

Tex-620-J Determining Chloride and Sulphate Content in Soils

Western Alliance for Quality Transportation Construction (WAQTC)

WAQTC TM 1 * Fractured Faces

*Indicates test screen that allows for the entry of test results and other data required for reporting only (does not perform calculations).

Note: Although every effort has been made to ensure that the above information is correct, Spectra QEST makes no guarantee as to its accuracy.