

**BENCHMARK
GEOTECHNICAL LABS**



2024 FEE SCHEDULE

Prices valid until Jan. 1, 2025

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CLASSIFICATION & INDEX (X)			TORSIONAL RING SHEAR (RS)		
<u>Atterberg Limits</u> (ASTM D4318)	<u>UNIT PRICE</u>	<u>TEST #</u>	<u>Residual Shear Strength</u> (ASTM D6467)	360/point	RS1
PI Dry (BGL default)	145	X1	<u>Fully Softened Strength</u> (ASTM D7608)	360/point	RS2
PI Wet Prep	225	X2	<u>Residual and Fully Softened Strength</u>	689/point	RS3
<u>Moisture (MC)</u> (ASTM D2216)	21	X3	VOLUME CHANGE/EXPANSION (V)		
<u>Moisture & Density</u> (ASTM D7263b)			<u>Consolidation</u> (ASTM D2435A)		
MD, 2-2.5" diameter	30	X4-2.5	Incl. full curve w/ time rate readings until final rebound	449	V1
MD 3" diameter	43	X4-3	<u>Consol rebound-reload pt.</u>	48/point	V2
MD 4" diameter	110	X4-4	<u>Shrink-Swell w/ Expansion-Pressure Curve</u> (ASTM D3877m)	339	V3
MD 6" diameter	176	X4-6	This method was originally intended for lime-treated soils but works well on untreated soils.		
<u>Chunk Density</u> (ASTM D7263a)	106	X5	<u>Air-dry specimen prior to test - add</u>	34	V3-air dry
<u>Particle Size Analysis</u> (ASTM D422)			<u>Exp. Press.</u> (ASTM D3877m)	187	V4
Sieve -3/4"	122	X6	Multi-point expansion pressure curve to free swell.		
Bulk Sieve Charge +3/4"(if gravelly or >5Kg)	Add 90	X7	<u>Shrink Swell (SS)</u> (ASTM D3877m)	187	V5
Sieve + Hydrometer (Gs run separately)	212	X8	Multi-point volume change curve including field, saturated, air dry and oven dry conditions.		
-#200 Wash (ASTM D1140)	93	X9	<u>Expansion Index</u> (ASTM D4829)	315	V6
<u>Specific Gravity</u> (Particle Density)			<u>One-D. Swell/Collapse of Soils</u> (ASTM D4546)		
(ASTM D854) - #4 Sieve	93	X10	Part A (4 pt. curve, loaded then wetted)	1049	V7-A
(ASTM C127) + #4 Sieve	140	X11	Part B (rebound-reload)	350	V7-B
<u>Porosity</u>			Part C (wetted-loaded)	461	V7-C
Total Porosity (ASTM D7263)	128	X12	<u>% Collapse</u> (ASTM D5333)	210	V8
Effective Porosity (ASTM D7263 mod)	299	X13	<u>Triaxial Ko Consolidation (2-3" dia.)</u>	752	V9
<u>Organic Content (TOC)</u> (ASTM D2974)	88	X14	HYDRAULIC CONDUCTIVITY (H)		
<u>Fraction Organic Carbon (FOC)</u>			<u>Falling Head</u> (ASTM D5084) (2-3" dia.)	379	H1
By Walkley Black (subcontracted)	88	X15	<u>Constant Head</u> (ASTMD2434) (3" dia./6" dia)	379/525	H2/H2-6
DENSITY (D)			THERMAL CONDUCTIVITY (ASTM D5334) (T)		
<u>Standard Proctor</u> (ASTM D698)			As Received	216	T1
4- inch mold	240	D1	As Received and Oven-Dry	443	T2
6-inch mold	290	D2	4 Point curve from as-red to oven dry	886	T4
<u>Modified Proctor</u> (ASTM D15570)			5 Point curve from as-red to oven dry	1108	T5
4- inch mold Gs for rock correction add \$140	240	D3	6 Point curve from as-red to oven dry	1329	T6
6-inch mold Insufficient quantity-add \$70 per pt.	290	D4	CORROSIVITY (C)		
Check point 4"/ 6" mold	64/74	D5/D6	<u>Package A</u> (pH, Cl, SO ₄ , 100% sat resist.)	240	C1
STRENGTH (S)			<u>Package B</u> (pH, Cl, SO ₄ , as-red. resist.)	240	C2
Note: Prices for 2-3" diameter samples unless noted			<u>Package C</u> (pH,Cl,SO ₄ , as-red. resist., orp)	292	C3
<u>Unconfined Compression</u> (ASTM D2166)	105	S1	<u>Package D</u> (pH,Cl,SO ₄ ,100% sat resist., orp)	292	C4
<u>TXUU</u> (ASTM D2850)	175	S2	<u>PG&E Pkg. (Package D plus Sulfide)</u>	356	C5
For back-pressure saturation add -	122	S2-A	<u>Resistivity-As Received Moist</u> (ASTM G57)	84	C6
<u>TX-ICU no pp</u> (ASTM D4767 modified)	280	S3	<u>Resistivity-100% Saturated</u> (ASTM G57)	84	C7
<u>TX-ICU no pp staged</u> -mod.D4767 (per 2or3 pts)	560	S4	For large-scale resistiity on gravelly samples add-		
<u>TX-ICU w/ pp</u> (ASTM D4767)	560	S5	<u>pH</u> (ASTM G51)	41	C8
<u>TX-ICU w/ pp staged</u> -mod.D4767 (per 2or3 pts)	1119	S6	<u>Sulfate</u> (SO ₄)(EPA 300.0)(subcontracted in part)	81	C9
<u>TX-ICD -drained</u>	729/point	S7	<u>Sulfide</u> (lead acetate paper)	52	C10
Effective confining press. for any triax (>50 psi) add -	88/point	S8	<u>Redox</u> (ORP)(ASTM G200)	58	C11
<u>Ko or Anisotropic Consolidation add-</u>	175/point	S9	<u>Chloride</u> (Cl) (EPA 300.0)(subcontracted in part)	81	C12
<u>4" Diameter Triaxial Testing add -</u>	435/point	S10			

ENVIRONMENTAL TESTING (E)			WATER TESTS (W)		
Hydrogeology Option # 1 - Includes:	845	E1	Total Suspended Solids (ASTM D3977b)	56	W1
Effective Porosity (ASTM D6836m)			Total Dissolved Solids (SM 2540C)	56	W2
Total Porosity (Øt) (ASTM D7263)			Total Solids (SM 2540B)	56	W3
Grain Density (ASTM D854)			Particle Size Distribution (ASTM D3977c modified) - Call lab before testing	350	W4
Moisture Content (ASTM D2216)			ROCK/AGGREGATE TESTING (R)		
Volumetric Water Content (Øw)			Slake Durability (ASTM D4644)	233	R1
Volumetric Air Content (Øa)			LIME/CEMENT TREATING (LC)		
Bulk Density (ps) Wet & Dry D2937			Atterberg Limits - add	50	LC1
Hydraulic Conductivity (3" dia.)(ASTM D5084) or D2434 based on material type)			Compaction - add	110	LC2
Grain Size Distribution (ASTM D422)			Soil-Lime Proportion (ASTM D6276)	326	LC3
Soil Classification by USCS, USDA Classification by request			A 6-point curve to determine the optimum lime content for lime treatment.		
Hydrogeology Option # 2 - Includes:	711	E2	OTHER (O)		
Total Porosity (Øt) (ASTM D7263)			Remolding	82	O1
Grain Density (ASTM D854)			Before and/or After Test Photos	58	O2
Moisture Content (ASTM D2216)			Sample Pick-up (50 mile radius)	101	O3
Volumetric Water Content (Øw)			No charge for local pickup on jobs over \$2500		
Volumetric Air Content (Øa)			Insufficient Sample Charge - Add	58	O4
Bulk Density (ps) Wet & Dry D2937			Total Solids for Sediments	43	O5
Hydraulic Conductivity (3" dia.)(ASTM D5084) or D2434 based on material type)			Double Hydrometer (ASTM D4221 & D422)	443	O6
Grain Size Distribution (ASTM D422)			Logging of Shelby Tube	105	O7
Soil Classification by USCS, USDA Classification by request			Lead Shot Characterization - Call for quote		O8
Vadose Zone Option # 1 - Includes:	1026	E3	Zerovalent Iron Quant. for Perm. Reactive Barriers - per 4" sample:		
Air Permeability (in-situ moisture)(subcontracted)			Gravimetric analysis with magnetic separation. (for uncoated iron)	222	O9
Total Porosity (Øt) (ASTM D7263)			Gravimetric Loss On Ignition (for iron coated with GAC) - add	87	O10
Grain Density (ASTM D854)			Junior Technician Time, hourly	146	O11
Moisture Content (ASTM D2216)			Senior Technician Time, hourly	181	O12
Volumetric Water Content (Øw)			Principal Time, hourly	222	O13
Volumetric Air Content (Øa)			Witness Testing, per person, per hr.	93	O14
Bulk Density (ps) Wet & Dry D2937			Sample Preparation over #200 Sieve	58	O16
Grain Size Distribution (ASTM D422)			Fiber Content of Peat (ASTM D1997)	233	O17
Soil Classification by USCS, USDA Classification by request			Humification of Peat (ASTM D5715)	175	O18
Vadose Zone Option # 2 - Includes:	339	E4	Rush Testing		
Total Porosity (Øt) (ASTM D7263)			Rush - Priority given	Add	50%
Grain Density (ASTM D854)			Super Rush - Dedicated technician	Add	100%
Moisture Content (ASTM D2216)			CONTAMINATED SOILS		
Volumetric Water Content (Øw)			Contaminated soils are accepted on a limited basis and only after review with client. Please call us to discuss options.		
Volumetric Air Content (Øa)				Add	O15 50%
Bulk Density (ps) Wet & Dry D2937			OUR POLICIES		
Grain Size Distribution (ASTM D422)			Benchmark's payment terms are Net 30 on all invoices. Clients will be required to sign our Client Services Agreement. Subcontractor Agreements should be submitted seven (7) days prior to the commencement of testing for review and approval.		
Soil Classification by USCS, USDA Classification by request			Benchmark does not accept jobs with "pay when paid" terms. Please call to discuss payment terms.		
Air Permeability (ASTM D6539)			Benchmark Geolabs takes no liability or responsibility for samples left in storage after the completion of testing. All remaining samples will be discarded after 30 days unless arrangements are made for pick-up. We do not offer long-term storage of tested samples over 30 days from the date of final report unless specifically requested in writing on a project-by project basis.		
Effective (in-situ moist.) subcontracted	700	E5			