

**University of Florida - IFAS Soil and Water Science Department Core Laboratories
Mineralogy and Soil Chemistry Laboratory**

Mission Statement - This core laboratory will maintain departmental capability to provide basic physical, chemical, and mineralogical analyses for soils and sediments.

Location - G184 and G166 McCarty Hall

Contributing Faculty – Jonathan Judy

Equipment - X-ray Powder Diffractometer, Malvern Nano ZS Zetasizer, UV-VIS Spectrophotometer

Procedures and Costs per Sample –

Soil Mineralogical Assessment via XRD¹:

- (a) Particle-size fractionation - \$120
- (b) ID of clay-sized minerals - \$160
- (c) ID of silt-sized minerals - \$65
- (d) ID of sand-sized minerals (or analysis of samples “as is”) - \$65

XRD analysis of a sample as-is without interpretation - \$20/sample

Colloid/particle size (particles in suspension smaller than 10 microns) and electrophoretic mobility measurement:

- (a) Particle size distribution - \$15/sample
- (b) Particle electrophoretic mobility - \$15/sample

OR

\$25/hour for training and supervised/facilitated analysis by graduate students or postdoctoral fellows

SEM/TEM Sample Preparation and Analysis:

Analysis conducted using on campus facilities and billed at cost

Sample preparation/mounting, data analysis and interpretation: \$110/sample

Organic Matter/pH Content

Organic matter content determination via loss on ignition: \$7/sample

pH determination: \$7/sample

Note: Prices listed will be appropriately discounted for labor or materials provided from external sources. Use of the laboratory facilities by graduate students and post-doctoral associates will be accommodated to the extent possible.

Field sampling services may be available at cost. Samples submitted to third party labs for analysis (e.g. submitting digested samples to ARL for metals analysis) will be billed at cost.

For additional information contact:

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Prices for each procedure are established to cover the following costs on a per sample basis for the following: (i) Attrition of expendable materials (chemicals, glassware, etc.). (ii) Maintenance and operation costs of equipment required to conduct the procedure. (iii) Labor costs for the level of expertise required for the procedure. For example, some instrumentation (e.g., x-ray diffractometer) can only be safely operated by well-trained personnel. Also, radiation safety badges are required for operation of the diffractometer. These badges require a monthly fee and are only issued to authorized persons whose labor costs are higher than for student OPS labor.