



Ariana Rivera-Añazco Lead Laboratory Technician

Ms. Rivera-Añazco is a geologist, geochemist, and analytical technician with diverse experience supporting geotechnical and environmental investigations through field sampling, data management, laboratory analyses, and QA/QC. Her background includes soil and water chemistry, and applied field investigations across mining-impacted, forested, and hydrothermal systems.

She serves as *Lead Laboratory Technician* for Pilch Engineering's geotechnical materials testing laboratory. Her responsibilities include equipment setup, organization, and maintenance; sample handling and chain-of-custody; laboratory workflow coordination; data review; managing testing procedures and protocols; QA/QC documentation; monitoring supply levels; and lab safety.

Ms. Rivera-Añazco is trilingual (Spanish-English-Italian); she has experience working in U.S. and European research settings; and she's known for her analytical rigor, initiative, attention to detail, creativity, and commitment to quality and continuous improvement.

Education

M.S., Geosciences, option in
Geochemistry, Montana Technological
University, 2026
B.S., Geology, Yachay Tech University,
Ecuador, 2021

Strengths

Communication
Attention To Detail
Problem Solving
Self-Motivation
Creativity
Process Improvement
Project Design
Risk Management

Geology, Geochemistry & Lab Expertise

Geological Mapping & Sample
Documentation
Geotechnical Properties of Soils & Rock
Soil, Sediment, Surface Water &
Hydrothermal Water Sampling
In-Situ Measurements: pH, Temperature,
DO, Conductivity
Filtration & Acidification for Metals
Preservation
Spectrophotometric Analyses (Fe,
Sulfide, Silica)

Computer & Software Expertise

R, Python (Data Cleaning, Visualization)
MS Office (Advanced Excel)
Illustrator, Inkscape
ArcGIS
WORM Portal
MINTeq

Contact

Work: (307) 672-8750
Cell: (406) 792-5021
Email:
arivera-anazco@pilchengineeringllc.com

EXPERIENCE

Laboratory

- Soil acid digestion (trace metals)
- Organic acid extraction (LMWOAs)
- Microbial DNA extraction
- Ion Chromatography (organic acids, anions, cations)
- Total Organic & Inorganic Carbon (TOC/TIC)
- GLP/GDP: SOP and documentation/notes
- Validation: Analytical instruments and methods of analysis
- Laboratory safety compliance and proper chemical waste disposal

Research & Field Work

- Monthly sampling for the "RAPID: Geochemical & Microbial Response to Hydrothermal Explosions in Biscuit Basin" project – Yellowstone National Park
- Hydrothermal spring and soil sampling in geothermal environments – Yellowstone National Park
- Water and sediment sampling of Silver Bow Creek – Montana
- Restoration monitoring support in capped, mine-impacted areas through soil and vegetation assessments - Montana
- Mine-contaminated soil sampling and acid digestions to evaluate metal concentrations and associated microbial communities – Montana
- Seed collection, cleaning, and greenhouse propagation to support native plant restoration – Montana
- Vegetation and soil assessments – bulk density, moisture content, species composition – in a long-term forest monitoring program within a protected nature reserve – Italy
- Application of standardized ecological survey methods in coniferous and agricultural forest systems – Italy
- Rock sampling in evaporite deposits for regional geological characterization - Peru

Languages

- Spanish: Native
- English: C1 proficiency by the Test of English as a Foreign Language (TOEFL)
- Italian: A2