

Why thermal conductivity measurement matters for geological research

Thermal conductivity is a critical design parameter for geothermal heat pump systems, borehole thermal energy storage, enhanced geothermal systems, underground transmission lines, and radioactive waste repositories. Accurate measurement in heterogeneous geological materials—from intact rock cores to loose soils and aggregates—requires an instrument capable of handling variations in density, moisture, and composition. ASTM D5334 specifies that measurements are applicable for both intact and reconstituted soil specimens and soft rock specimens, ensuring standardized, repeatable results.



Why the C-Therm Trident is Ideal for Geological & Geothermal Applications



The C-Therm Trident Thermal Conductivity Instrument is designed to handle a variety of geological and geothermal samples under representative lab and field conditions. The Trident delivers fast, accurate, and repeatable thermal conductivity measurements across rocks, soils, core samples, and aggregates, fully compliant with ASTM and ISO standards.



Variety of Samples

Measure thermal conductivity across a wide range of samples, including grouts, rock cores, and aggregates, all on a single platform.



Representative Test Conditions

Measures samples under true temperature, pressure, moisture, and density for precise, reproducible results.



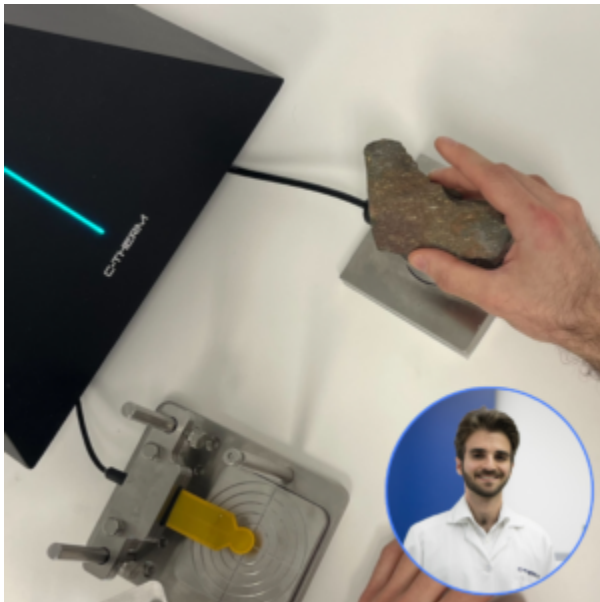
Fast Transient Methods

Fast, precise results in minutes, even for small or irregular samples.



Minimal or No Sample Preparation

Little to no sample preparation required, saving time and reducing errors.



Request a demo to see how the C-Therm Trident delivers fast, accurate, and repeatable thermal conductivity measurements for geological and geothermal applications.