

KD2 Pro Thermal Properties Analyzer



The KD2 Pro uses interchangeable sensors to measure thermal diffusivity, specific heat, thermal conductivity, and thermal resistivity of porous materials and liquids *in situ*. Sample temperature can range from -50° to 150°C (-58° to 302°F). Analysis methods conform to IEEE and ASTM standards. Unlike any previous instrument, the KD2 Pro uses the full exponential integral solution to the heat flow equation for both single- and dual-needle sensors. Data are recorded during both heating and cooling phases of the measurement, and a mathematical non-linear least-squares-inverse procedure is implemented in firmware to fit the data to solutions of the differential equations and find the values of specific heat and thermal conductivity. Fitting heating and cooling data minimizes effects of sample temperature drift on the values obtained for the thermal properties.

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