

ORNL METROLOGY LABORATORY

Metrology, the science of measurement, is unique among technical disciplines; it is both a science in its own right and an indispensable component of accurate data transfer among virtually all other scientific fields. Metrologists ensure that the accuracy of an instrument used to acquire data is both verifiable and expressed in terms of universally recognized measurement units.

The Oak Ridge National Laboratory Metrology Laboratory (ORNL ML) provides the means by which the accuracy of instruments used in scientific research can be validated by tracing their calibration to the National Institute of Standards and Technology (NIST). The calibration of instruments that are vital to the safe and efficient operation of ORNL facilities can also be traced to NIST through Metrology Services and Measurement Standards (MS&MS), providing assurance of compliance with regulations and good operational practice.



ORNL ML capabilities include the calibration and certification of instruments that measure flow (gas and liquid phase), electrical quantities, pressure, vacuum, temperature, and optical transmittance. In addition, ORNL ML can assist the researcher in making special measurements for which there are no established methods.

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