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STANDARDS & GUIDANCE BRIEF · UNITED STATES · MEASUREMENT POLICY

NIST Traceability

Metrological traceability to SI units through NIST

DOCUMENT	QES-WP-123, Rev B	DATE	November 7, 2026
ISSUED BY	National Institute of Standards and Technology	PREPARED BY	Conner Davidson
EDITION	NIST policy on metrological traceability (current)	STATUS CHECKED	October 24, 2026
INDUSTRIES	Pharmaceutical, Laboratories & Calibration	ONLINE	qesisbest.com/standard-nist-traceability.html

CURRENT EDITION Traceability is a property of a measurement result, not of an instrument or a laboratory, and NIST does not certify other parties' claims of traceability.

What It Covers

What it means for a calibration or measurement result to be traceable: related to a stated reference, usually the SI through a national metrology institute such as NIST, by a documented, unbroken chain of calibrations, each contributing to the measurement uncertainty.

Who It Applies To

Anyone whose quality system, regulator, or customer requires calibrated equipment — which is nearly every regulated manufacturer and laboratory.

Key Requirements

- A documented, unbroken chain of calibrations back to a national or international standard.
- A stated measurement uncertainty at each step of the chain.
- Calibration suppliers whose competence is demonstrated, normally by ISO/IEC 17025 accreditation with the calibration in scope.
- Records that identify the standards used and their own calibration status.

What an Auditor Asks to See

- Calibration certificates showing results, uncertainty, and the standards used.
- Evidence the calibration supplier is accredited for that parameter and range.
- What was done when a standard was later found out of tolerance.

Where Systems Fall Short

- Certificates that say "NIST traceable" with no uncertainty or standards listed.
- No impact assessment when an instrument is found out of tolerance.

How QES helps. Calibration programs with supplier scopes checked, uncertainties stated, and out-of-tolerance impact assessed. See the gap assessment: qesisbest.com/services.html#gap-assessment · +1 (401) 246-3204 · mweeden@qesisbest.com

Sources, checked October 24, 2026. NIST — Metrological traceability — www.nist.gov/calibrations/traceability; BIPM — Joint Committee for Guides in Metrology — www.bipm.org.

A summary for orientation, prepared by Quality Excellence Services. It does not reproduce or replace the standard or regulation: read the official text, which governs. Not legal advice.