QUALITY EXCELLENCE SERVICES

Quality Excellence Services
18 Maple Avenue, Ste. 148
Barrington, RI 02806
United States of America
+1 (401) 246-3204 · +1 (401) 252-9653
mweeden@qesisbest.com · https://QESisBest.com

STANDARDS & GUIDANCE BRIEF · UNITED STATES · NATIONAL STANDARD (WITHDRAWN)

ANSI/NCSL Z540.3

Requirements for the Calibration of Measuring and Test Equipment

DOCUMENT	QES-WP-158, Rev B	DATE	November 7, 2026
ISSUED BY	NCSL International (American National Standard)	PREPARED BY	Conner Davidson
EDITION	2006 edition	STATUS CHECKED	October 24, 2026
INDUSTRIES	Laboratories & Calibration, Aerospace & Defense, Government & Defense Suppliers	ONLINE	qesisbest.com/standard-ansi-ncsl-z540-3.html

WITHDRAWN Withdrawn by NCSL International in 2020 in favor of ISO/IEC 17025:2017. Still named in older flowdowns, which should be updated.

What It Covers

Requirements for a calibration system, notably the limit on the probability of false acceptance (2 percent) when equipment is judged in tolerance.

Who It Applies To

Only where an existing contract still invokes it; otherwise ISO/IEC 17025 and ISO 10012 take its place.

Key Requirements

- False-accept risk limited to 2 percent, or test uncertainty ratio of at least 4:1 where risk cannot be calculated.
- Traceable calibrations with uncertainty stated.
- Out-of-tolerance evaluation and notification.

What an Auditor Asks to See

- How your calibration supplier controls false-accept risk, if the contract still cites Z540.3.

Where Systems Fall Short

- Purchase orders that still require Z540.3 from calibration suppliers who no longer reference it.

How QES helps. Flowdown updates to ISO/IEC 17025, with decision rules that preserve the risk control Z540.3 was cited for. See the gap assessment: qesisbest.com/services.html#gap-assessment · +1 (401) 246-3204 · mweeden@qesisbest.com

Sources, checked October 24, 2026. NCSL International — ncsli.org.

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