



COLLEGE of AMERICAN
PATHOLOGISTS

Identify instrument
problems before
they impact your
patient test results

Calibration Verification/Linearity



Calibration Verification/Linearity (CVL)

Improve confidence in instrument performance and patient test results

Calibration verification and linearity studies are the best way to determine if your instrument/method is performing at its optimal level.

Clinicians depend on reliable and accurate results from your laboratory to drive patient care decisions. That is why it is critical to identify instrument problems before they can impact patient test results. The calibration verification procedure helps ensure that reported patient test results are accurate for each test system.

With regular, proactive monitoring of instrument and method performance, you can identify calibration drifts before they can affect results. Linearity studies can help you identify any analytical measurement range (AMR) changes that could result in inaccurate results. In addition to a regular monitoring schedule, you should perform calibration when new instruments are acquired, when reagent lots are changed, and after major instrument maintenance.

“In our laboratory, we touch 10,000 patients a day. The cause [of errors] might be calibration instability, instrument problems, assay interferences, variations in reagent quality, or preanalytic variables. Any of those can contribute to a large-scale testing error.”

– Nikola Baumann, MD, Co-director, Central Clinical Laboratory at Mayo Clinic
CAP TODAY, December 2013 issue

Enjoy the CAP advantage

- **Save time.** We do the work preparing samples that cover a broad range to challenge your instrument system. These samples cover ranges from near zero to the top of the AMR for most clinical analyzers.
- **Meet your laboratory's needs.** Choose from a broad testing menu of analytes and programs.
- **Get thorough results that give you confidence in your results.** Receive rigorous statistical analysis and custom reports with easy-to-understand peer comparison data.
- **Resolve issues quickly.** A user guide provides helpful details for using the program. Troubleshooting guides take you step by step through any issues.
- **NEW—Access new International System of Units (SI) support.**



Simplify your CVL needs with the CAP's comprehensive program

Testing Kit

You receive everything you need to test and accurately report your CVL results, including CAP-prepared samples. Most of the CVL programs offer human-based specimens to closely mimic your patient results.

Customized Report Package

We provide reports, analysis, evaluations, and other resources that can provide insights about your instruments.

- **Executive Summary**—provides an overview of your calibration verification and linearity results for all analytes.
- **Calibration Verification Evaluation**—provides comparisons of your results with target values based on peer means or reference method values.
- **Linearity Evaluation**—assesses your results for imprecision and unexpected deviations. In the event the specimens provided go beyond the AMR, the CAP provides an evaluation that can help you determine the accuracy of the auto-dilution mechanism of your instrument.
- **Troubleshooting Guide**—provides a checklist for problematic results and suggested actions.
- **Participant Summary**—includes peer group statistics and enhanced diagnostic information for early insight into potential problems.

User Guide

Interpret your evaluations and reports with in-depth information about the CAP's CVL evaluation criteria, including troubleshooting information with suggested actions, as well as FAQs and a glossary of terms.

Online Support

Access CVL resources, reports, and more by logging in to e-LAB Solutions™.



Learn more. Visit cap.org.



We understand the many demands you face.

ONLY THE CAP can provide the comprehensive programs and services to help you consistently deliver accurate test results, monitor overall laboratory performance, and increase and sharpen your staff's skills.

We can help you discover new ways to achieve your goals.



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