

## **Significance and Use for Applying ANSI Standards to Portable Detectors**

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Portable radiation detectors are used anywhere radiation or radioactive materials are present or suspected. The utilization for these instruments range from near background levels (<100 $\mu$ R/h), intermediate radiation control levels, to extreme levels (>100R/h). At the two extremes, the accuracy of the measurements and associated interpretation are important as misinterpretation can result in significant health and/or financial and/or regulatory issues. The primary stakeholders in these issues are the instrument suppliers, the instrument users, and regulators. It is important that consensus standards be applied to the life cycle phases of the instrument.

Initial phase: Test and Specification is important for the instrument suppliers and users and is supported by ANSI N 42.17AC.

Calibration phase is directly applicable to users and calibration facilities and is supported by ANSI N323AB.

Instrument selection and use phase currently has no existing ANSI standards specific to user field applications. Two documents that provide guidance and protocols are the MARSSIM and ASTM E1893 for near background measurements.

This presentation will describe the provisions of the two ANSI standards and describe activities currently addressing detector selection and use for field conditions.