

FORUM



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The Latest Developments in Instrumentation Equipment

Compliance Magazine recently asked a group of instrumentation experts about the greatest concerns of equipment users and how they are being answered by manufacturers and industry experts.

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User safety is obviously the primary concern of portable instrument users. Even so, many do not take the time to perform a simple instrument calibration check before use to ensure that the device they rely upon for their safety is able to deliver accurate readings.

Calibration drift is a normal occurrence and happens to most instruments over time. But, if unchecked, it can lead to inaccurate gas readings and subsequent failure to alarm at hazardous levels, risking users' health and safety. Fortunately, the solution to this problem is simple. Before using an instrument, users should test it to verify that it is producing accurate readings.

There are two ways to verify instrument calibration accuracy: through a functional or "bump" test or a full calibration. A bump test is a means of verifying calibration by exposing the instrument to a known concentration of test gas. The instrument reading is compared to the actual quantity of gas present as indicated on the cylinder. If the instrument's response is within an acceptable range of the actual concentration, then its calibration is verified. If the bump test results are not within the acceptable range, then a full calibration must be performed.

This concern is being addressed by conscientious manufacturers through the increasingly available autocalibration features and advanced computerized calibration and record-keeping systems.