



Technical Brief

TEMPERATURE

How Often Should You Calibrate Your Instruments?

The most common approach is to calibrate annually, and that's the best recommendation in many situations, but not all.

Quality instruments such as those from Tel-Tru are calibrated prior to shipment. After installation, there are several factors to think about when considering calibration frequency; these are the most common:

Regulatory / quality requirements and traceability

Many industries require instruments to be periodically calibrated to meet regulatory and/or quality requirements. This is usually clearly defined for the type of instrument and application. Calibration standards should be traceable to National Institute of Standards and Testing (NIST).

Process tolerance vs instrument accuracy

In some applications, the process dictates instrument accuracy requirements. This is common when measuring temperature in the food and beverage industry where calibration should be done more frequently. Thermometer accuracy can be checked with a dry block calibrator such as the Tel-Tru Check-Set right on the production line, for example.

Measurement criticality and cost of failure

For instruments that measure critical processes, where the cost of failure is high, calibration should be performed annually if not more often.

Drift and stability history

Drift can occur in sensors due to aging, and is particularly a concern for pressure sensors. If drift is a concern or the instrument has had a history of instability, a more frequent calibration is a good idea.

Application variables

Temperature, pressure, vibration, proper installation and out-of-range conditions are just a few of the application variables that affect accuracy. If your application includes one or more of these conditions, it probably makes sense to calibrate at least once a year.

If you have any questions or need recommendations about calibration frequency of your instruments, feel free to call our experts at 800-232-5335 or visit <https://www.teltru.com>



Ice water calibration method



Tel-Tru Check-Set calibrator



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TB1218
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