RS METROLOGY CORNER

Calibration is primarily done to achieve 5 main purposes:

▷ To make sure that the readings of equipment or instruments are consistent with other measurements and display the correct readings every single time

▷ To determine the accuracy, precision, reliability and deviation of the measurements produced by all the instruments

▷ To establish the reliability of the instrument being used and whether it can be trusted to deliver repeatable results each time

▷ To map the ‘drift’ as documented. Instruments have a tendency to produce inaccurate measurements over a period of time, following repeated use.

▷ Ensuring that the industry standards, quality assurance benchmarks such as current good manufacturing practice (cGMP) and government regulations are adhered to.

RS SERVICES NEWSLETTER

THE IMPORTANCE OF CALIBRATION

Calibration is responsible for defining the accuracy of any measurement and its quality that is recorded by any instrument. When you start working with any instrument, it must be calibrated well, thus assuring you of accurate results. However, over a period of time you will start observing a ‘drift’. This holds true while using particular technologies or measuring particular parameters such as temperature and humidity. Even overuse, wear and tear, or external factors such as mechanical or electrical shocks may cause a drift in measurements. The drift will occur depending on how quickly the instrument degrades owing to these factors.

Calibration minimizes such uncertainties by assuring the accuracy of the test equipment. When you regularly calibrate your equipment, you can eliminate the drift at its budding stage instead of allowing it to grow till it affects the measurements in significant ways. You need to be confident in the measurements of your equipment at all times, which calls for a regular calibration of equipment throughout its lifetime for reliable, accurate and repeatable measurements.
FREQUENCY OF INSTRUMENT CALIBRATION

How often you conduct instrument calibration mainly depends upon its tendency to drift from the true measurement and how it impacts the quality of the end product. Examine each instrument being used and study its behavior. Based on this information, you can design a calibration schedule for each instrument. The interval between calibrations can vary as:

- Weekly
- Monthly or bi-monthly
- Quarterly, semi-annually or annually

If the instruments are used quite frequently or when critical measurements are taken regularly, it is advised that calibration is done every week. Some instruments need to be calibrated once or twice every month without fail to ensure that the measurements stay accurate. Some instruments might not be used frequently or do not have the tendency to show a drift easily. They can be calibrated quarterly, semi-annually or annually. Even if the measurements seem accurate, calibrate it regularly. If you notice any change in measurements before the scheduled timeline, calibrate the instrument immediately instead of waiting for the scheduled date.

Calibration helps in quantifying and controlling errors and uncertainties within various measurement processes to an acceptable level. Further, it helps in improving the accuracy of the measuring device, which in turn improves the quality of the end product. In short, regular calibration allows pharmaceutical companies to have confidence in their results which they can record, monitor and control.

RS NEWS:
RS Calibration Services Inc. welcomes two new members to our Team:

- Darryl Clinkscales as our Senior Operations Manager.
  Darryl has over 20 years of calibration and instrumentation management experience in the FDA environment
- Susan Goad as our New Sales Representative. Susan has over 15 years of sales experience in the Pharmaceutical and Biomedical industry.

Industry Article for this issue of the RS Services newsletter:

6 STEPS TO COMPLIANT EQUIPMENT QUALIFICATION

“GMP Qualification”

“Almost all quality improvement comes via simplification of design, manufacturing... layout, processes, and procedures”.

- Tom Peters.

FEEDBACK
Let us know what you think? We would appreciate your comments and suggestions on this current issue and subjects for future newsletter editions. email your comments and or suggestions to rlyasgght@rscalibration.com