

Inspection Requirements for Spectrometers



Overview

Inspection methods are specified in 6. Points related to wavenumber (precision), 0 % transmittance, 100 % transmittance, linearity, resolution, and repeatability are specified. I will briefly describe the methods. In December 2023, the Indian Good Manufacturing Practices (GMP) and Requirements of Premises, Plant and Equipment for Pharmaceutical Products regulations (Schedule M) were revised, with Section 12 stating: The guidelines published by the World Health Organization (WHO) on following aspects relating. Note: Mandatory requirements in this annex are defined using the terms “shall” or “must”. The use of “should” indicates a recommendation. The areas of implementation include the quality manual, equipment records, calibration method G ide 25; Qual ements for the competence of calibration and testing laboratories (ISO/IEC Guide 25). This. Solutions in spectroscopy encompass a wide range of options. Spectroscopic instruments may be utilized to provide comprehensive analyses of materials or for. Spectrophotometry is a method to measure how much a chemical substance absorbs or transmits light by passing a beam of light through a solution of the substance of interest, and measuring the light intensity emitted. It is a quantitative measurement; the concentration of an analyte in a solution.



Article Content

Hot

Spectroscopy Europe February/March 2019

The performance specification of “fitness for purpose” for ultraviolet (UV) spectrometers used in regulated environments, applying documented control, e.g. pharmacopoeial monographs or

Sep 08, 2025 Hot

ISO 17025 Spectrophotometer Calibration Standards & Reference

NIST TRACEABLE ISO17025 ACCREDITED SPECTROPHOTOMETER CALIBRATION STANDARDS AND CUSTOM-MADE SPECTROPHOTOMETRY CALIBRATION STANDARDS
In addition to our

Jan 02, 2026 Hot

Confident Data Collection in the QC Lab: Spectrometer Performance

This evolution has progressively placed more of the responsibility for performance verification on the instrument itself. Spectrometer performance criteria are increasingly stringent, as various oversight

Apr 13, 2026 Hot

Qualification of IR Spectrophotometers

This document provides guidelines for qualifying infrared spectrophotometers used in OMCL laboratories. It describes the process for qualification at four levels: Level I

Mar 24, 2026 Hot

Spectrophotometry Standards

Like all instrumentation they require regular checking and validation to a greater or lesser extent. The parameters tested for spectrophotometers are photometric accuracy (absorbance linearity),

Aug 28, 2025 Hot

FTIR-Operation and Calibration SOP

Standard Operating Procedure (SOP) for Operation, Calibration, Cleaning, and Maintenance of FTIR (Fourier Transform Infrared Spectrometer).

Jul 11, 2025 Hot

Spectrophotometer Calibration and Validation Guide

Meet regulatory and accreditation requirements: ISO standards and many quality systems require documented calibration and periodic validation.

Jun 29, 2026 Hot

Good Laboratory Practice with a UV-Visible Spectroscopy ...

System suitability requirements for chromatography systems have been well defined, but no similar definition exists yet for UV-Visible spectroscopy systems. However, in practice, users have

Feb 04, 2026 Hot

Spectrophotometer Calibration and Validation Guide

Ensure accurate results with proper spectrophotometer calibration and validation to maintain reliable, traceable measurements.

Feb 06, 2026 Hot

Spectrophotometer Calibration & Maintenance

A properly calibrated device is a requirement for medical testing and other industrial regulations, and records may be required for regulatory standards

Mar 17, 2026 Hot

Spectrophotometer Calibration and Validation: Ensuring

Spectrophotometers are crucial tools in a variety of scientific areas, such as chemistry, biology, and environmental research, where precise and accurate

Oct 19, 2025 Hot

Instrument Validation and Inspection Methods

The aim of instrument validation is to confirm that the instrument offers adequate performance for the inspection and manufacture of products. When performing an actual validation, it is important to

Jan 11, 2026 Hot

Establishment of instrument operation qualification and routine ...

Establishment of instrument operation qualification and routine performance qualification procedures for handheld near-infrared spectrometers used at different locations within a laboratory

Apr 01, 2026 Hot

Reference Standards for Validating your

Why Validate and Calibrate with FireflySci? As the world's foremost spectrophotometer reference standard manufacturer, we have a dedicated staff

Aug 15, 2025 Hot

Hardware Validation; JIS; ASTM; Japanese

Inspection methods are specified in 6.3 Calibration and Inspection Methods for Spectrophotometers. Points related to wavenumber (precision), 0 %

Dec 23, 2025 Hot

Analytical Chemistry Standards

ASTM's analytical chemistry standards are instrumental primarily in chemical analysis of various metals, alloys, and ores. These analytical chemistry standards present various test methods and techniques

Apr 06, 2026 Hot

Establishment of instrument operation qualification and routine ...

Wavelength and photometric accuracy (and repeatability), spectroscopic noise, stray light, and bandpass were assessed between instruments. Results were found to be consistent

Jul 05, 2025 Hot

Compliance in spectrometry: quality assurance of ...

2. International Organization for Standardization (ISO) / International Electrotechnical Commission (IEC), General Requirements for the Competence of Calibration and Testing Laboratories, Guide 25, 1990

Jul 10, 2025 Hot

Spectrometers – Visual Encyclopedia of Chemical

Spectrometers use light wavelengths to investigate the chemical composition of a sample. Atomic spectrometers use an analytical method by which one or several

Apr 25, 2026 Hot

Imaging Spectrometers Selection Guide: Types,

Specifies the requirements for the accuracy and performance of imaging spectrometers. It includes requirements for spectral range, spectral resolution,

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Compliance Requirements for Spectroscopy Solutions

Each type of spectrometer offers a unique benefit, but as a group they are designed to investigate three quintessential unknowns: identity, purity, and

Jan 31, 2026 Hot

Spectrophotometer Calibration

Our Spectrophotometer Calibration processes ensure that your instruments meets engineering, machining, parts design, quality control, and inspection requirements. You'll be confident knowing

Jun 17, 2026 Hot

Spectro Analysis Work Instruction

This document provides work instructions for spectro analysis testing at Welspun Gujarat Stahl Rohren Ltd's Longitudinal SAW Pipe Division. It outlines the

Apr 20, 2026 Hot

SAMPLING AND TESTING OF MUTUAL RECOGNITION

The present Annex 4 contains a general introduction and requirements for IR spectrophotometers. Level III (Periodic and motivated instrument calibration/checks) and IV (In-use instrument checks)

Mar 27, 2026 Hot

Do We Qualify or Validate a Spectrometer?

We critically review the qualification and validation approaches in the World Health Organization Technical Report Series (WHO TRS) 1019 Annex 3 and its applicability to spectrometer

Feb 24, 2026 Hot

Instrument Validation and Inspection Methods

To perform an actual instrument evaluation, select the required performance items and set the appropriate evaluation criteria for the inspection. The effective application of a validation program

Nov 03, 2025 Hot

UV Vis Spectrophotometer Calibration

The performance of UV Vis spectrometers affects the quality of results and must be verified regularly. Read about Pharmacopeia compliant UV Vis calibration.

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Dec 04, 2025 Hot

USP General Chapter <1058>

This includes the requirement number, the requirement, and the operating parameter needed by the laboratory. The design qualification includes the next two columns, outlining the instrument

Sep 02, 2025

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