SOP Template: Recording Calibration Data and Generating Calibration Certificates

This SOP describes the procedures for **recording calibration data and generating calibration certificates**, ensuring accurate documentation and traceability of calibration activities. It covers the steps for collecting calibration measurements, verifying equipment accuracy, documenting results systematically, and producing official calibration certificates. The goal is to maintain equipment reliability, compliance with quality standards, and transparent certification for all calibrated instruments.

1. Purpose

To establish a standardized procedure for recording calibration data and generating calibration certificates to ensure equipment accuracy, traceability, and compliance with quality standards.

2. Scope

This procedure applies to all personnel responsible for calibrating, recording, and certifying measuring equipment within the facility.

3. Responsibilities

- **Calibration Technician:** Perform calibrations, record data, and prepare certificates.
- **Quality Manager:** Review and approve calibration records and certificates.
- **Instrument Owner/Department:** Ensure instruments are submitted for calibration as required.

4. Procedure

4.1 Preparation

- Verify that calibration standards are up-to-date and traceable to recognized national/international standards.
- Gather all necessary documentation and forms for recording data.
- Identify the instrument to be calibrated and verify its status and previous calibration records.

4.2 Recording Calibration Data

1. Document instrument identification details (make, model, serial number, and asset tag).
2. Record environmental conditions (temperature, humidity) if applicable.
3. Perform calibration as per approved methods and record all measurement readings and reference values in the **Calibration Data Sheet** (see template below).
4. Note any adjustments made and whether the instrument was within tolerance limits.

4.3 Review and Verification

1. Review recorded data for accuracy and completeness.
2. Verify results against acceptance criteria and original equipment specifications.
3. If instrument fails to meet criteria, note corrective actions taken.

4.4 Generating Calibration Certificates

1. Transfer approved calibration data to the official **Calibration Certificate Template** (see sample below).
2. Include all required information: instrument details, environmental conditions, standards used, results, date, and authorized

signatures.
3. Assign a unique certificate number for traceability.
4. Store completed certificates in a secure, retrievable format (electronic or hard copy).
5. Issue the certificate to the responsible department or equipment owner.

5. Records and Documentation

- Calibration data sheets
- Calibration certificates
- Equipment calibration schedules/logs
- Traceability records for calibration standards

6. Calibration Data Sheet Template

Instrument Name	[Enter Name]	**Serial Number**	[Enter Serial]
Model	[Enter Model]	**Date**	[Enter Date]
Environmental Conditions	Temp: [ ] °C, Humidity: [ ] %		

Reference Value	Measured Value	Within Tolerance	Remarks
[ ]	[ ]	[Yes/No]	[ ]
[ ]	[ ]	[Yes/No]	[ ]

7. Calibration Certificate Template

Calibration Certificate	
Certificate No.	[Unique Number]
Instrument Details	Name: [ ] Model: [ ] Serial: [ ]
Date of Calibration	[ ]
Calibration Standard Used	[Standard Name/ID, Traceability]
Environmental Conditions	Temp: [ ] °C, Humidity: [ ] %
Results	• Reference: [ ] | Measured: [ ] | Within Tolerance: [Yes/No]
Status	[Pass / Fail]
Technician	[Name & Signature]
Quality Approval	[Name & Signature]

8. References

- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- Internal Calibration Procedures and Quality Manuals