

SOP: Frequency and Scheduling of Calibration Activities

This SOP defines the **frequency and scheduling of calibration activities** to ensure all measuring instruments and equipment maintain accuracy and reliability. It includes guidelines for establishing calibration intervals based on manufacturer recommendations, usage patterns, and regulatory requirements. The procedure ensures timely scheduling, documentation, and review of calibration activities to support consistent quality control and compliance across all operational processes.

1. Purpose

To establish procedures for determining, scheduling, performing, and documenting the calibration of measuring instruments and equipment used in operations, ensuring ongoing accuracy and compliance with applicable standards.

2. Scope

This SOP applies to all departments and personnel responsible for equipment calibration within the organization.

3. Responsibility

- **Quality Assurance (QA):** Oversees implementation, documentation, and annual review of calibration schedules.
- **Department Supervisors:** Ensure all instruments are scheduled for calibration as required.
- **Calibration Personnel:** Perform calibration according to established intervals and document all activities.

4. Definitions

- **Calibration:** The process of configuring an instrument to provide a result for a sample within an acceptable range.
- **Calibration Interval:** The set period between required calibrations, determined by regulatory standards, manufacturer recommendations, or in-house policies.

5. Procedure

1. **Establish Calibration Intervals**
 - Refer to manufacturer guidelines for recommended calibration frequency.
 - Assess usage patterns, criticality, equipment history, and regulatory requirements to determine additional needs.
 - Document approved calibration intervals for each device.
2. **Scheduling Calibration**
 - Create and maintain a master calibration schedule including all instruments and respective intervals.
 - Assign responsibility for each scheduled calibration.
 - Utilize a tracking system (electronic or manual) to alert responsible staff of upcoming due dates.
3. **Performing Calibration**
 - Follow standard calibration procedures or manufacturer instructions.
 - Record all calibration results, adjustments, and status of equipment (pass/fail).
4. **Documentation and Review**
 - All calibration activities must be recorded in calibration logs or management systems.
 - Maintain calibration certificates and reports for audit and review.
 - QA reviews calibration records annually and updates intervals or procedures as necessary.
5. **Handling Overdue Calibrations**
 - Flag equipment overdue for calibration; remove from service until calibration is complete.
 - Investigate and document any impact on processes or products if overdue equipment was used.

6. Calibration Schedule Template (Sample)

Instrument/Equipment	Identification Number	Calibration Interval	Last Calibration Date	Next Calibration Due	Responsible Person
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pH Meter	EQ-001	6 months	2024-03-15	2024-09-15	John Doe
Analytical Balance	EQ-002	12 months	2024-01-10	2025-01-10	Jane Smith

7. Records and Retention

All calibration records must be retained for a minimum of 3 years or as specified by regulatory guidance.

8. References

- Equipment manufacturer manuals
- Regulatory and industry standards (e.g., ISO/IEC 17025)
- Internal Quality Management Procedures

9. Revision History

Version	Date	Description of Change	Approved By
1.0	2024-06-01	Initial release	QA Manager