SOP: Inspection and Quality Check for Instrument Integrity

1. Purpose

This SOP details the process for **inspection and quality check for instrument integrity**, encompassing routine visual inspections, functional testing, calibration verification, identification of wear and damage, documentation of findings, and corrective actions. The objective is to ensure that all instruments meet specified standards for accuracy, reliability, and safety, thereby maintaining optimal performance and compliance with regulatory requirements.

2. Scope

This SOP applies to all laboratory and facility instruments requiring regular inspection and maintenance to ensure continued integrity and reliable use.

3. Responsibilities

- **Users/Operators:** Perform routine checks and report irregularities.
- **Maintenance Personnel:** Conduct thorough inspections, functional tests, and calibrations according to schedule.
- **Quality Manager:** Review documentation, ensure compliance, and oversee corrective actions.

4. Procedure

1. **Routine Visual Inspection**
    - Check for external damage, corrosion, loose parts, and contamination.
    - Note any physical abnormalities.
2. **Functional Testing**
    - Operate the instrument as per user manual.
    - Verify all controls, displays, and indicators are functioning correctly.
3. **Calibration Verification**
    - Check calibration status per schedule.
    - If due, perform calibration as per manufacturer's guidelines.
4. **Identification of Wear and Damage**
    - Examine critical components for signs of wear, fatigue, or failure.
    - Document any findings.
5. **Documentation of Findings**
    - Record results of inspections and tests in the *Instrument Inspection Log* (see Section 7).
    - Note instrument status: Pass/Fail/Requires Attention.
6. **Corrective Actions**
    - Isolate and label any instrument that fails inspection.
    - Initiate maintenance or repair requests as needed.
    - Document all corrective actions taken and notify relevant personnel.

5. Acceptance Criteria

- No visible signs of damage, wear, or contamination.
- Instrument passes all functional tests.
- Calibration is within acceptable limits and current.

6. Documentation

- Complete the **Instrument Inspection Log** for each inspection.
- Maintain all records for at least 3 years or as per regulatory requirements.

7. Instrument Inspection Log Template

Date	Instrument ID	Inspector	Visual Check	Functional Test	Calibration Status	Findings	Status	Corrective Action (if any)	Signature
YYYY-MM-DD	ID1234	Initials	Pass/Fail	Pass/Fail	Date/Pass/Fail	Describe findings	Pass/Fail/Attention	Describe action	Initials

8. References

- Manufacturer's instrument manuals
- Facility maintenance guidelines
- Applicable regulatory standards (e.g., ISO, FDA, GLP/GMP)

9. Revision History

Version	Date	Description of Change	Approved By
1.0	YYYY-MM-DD	Initial SOP Issue	Sign/Initials