Standard Operating Procedure (SOP)
Pre-calibration Inspection and Cleaning Procedures

This SOP details the **pre-calibration inspection and cleaning procedures** necessary to ensure the accuracy and reliability of measurement instruments. It covers the systematic inspection of equipment for damage, cleanliness, and proper functioning prior to calibration, as well as the appropriate cleaning methods to remove contaminants that could affect calibration results. The objective is to maintain equipment integrity and enhance the precision of calibration outcomes by implementing standardized inspection and cleaning practices.

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1. Purpose

To establish a standardized process for inspection and cleaning of instruments prior to calibration to ensure accurate and reliable results.

2. Scope

This procedure applies to all personnel responsible for the calibration of measurement equipment in the laboratory.

3. Responsibilities

- Calibration personnel must perform inspections and cleaning as outlined in this SOP.
- Supervisors are responsible for ensuring compliance and providing necessary training.

4. Materials and Equipment

- Clean, lint-free cloths
- Approved cleaning solutions (as applicable)
- Personal protective equipment (PPE): gloves, goggles, etc.
- Inspection checklist
- Tools (as specified in instrument manuals)

5. Procedure

1. **Preparation**
    - Verify that all necessary PPE is worn.
    - Assemble required cleaning materials and inspection tools.
2. **Visual Inspection**
    - Examine the instrument for visible damage (cracks, dents, corrosion, loose parts).
    - Check labeling, serial numbers, and calibration status tags.
    - Inspect connectors, ports, and external surfaces for contaminants or obstructions.
3. **Functional Verification**
    - Power on the instrument, if applicable.
    - Observe for any abnormal operation, noises, or error messages.
    - Test key functionalities as appropriate.
4. **Cleaning**
    - Use appropriate cleaning agents and lint-free cloths to remove dust, grease, or other contaminants.
    - For sensitive surfaces (e.g., optical, electrical contacts), follow manufacturer-recommended cleaning methods.
    - Ensure no residue or moisture remains after cleaning.
5. **Documentation**
    - Record inspection and cleaning details in the calibration log or designated checklist. Note any damage or issues found.
    - Report unsatisfactory conditions to supervisor or maintenance personnel before proceeding with calibration.

6. Precautions

- Follow all safety guidelines for handling equipment and cleaning agents.
- Do not use unauthorized solvents or abrasive materials.
- If significant damage or contamination is detected, do not proceed with calibration until resolved.

7. References

- Manufacturer equipment manuals
- Laboratory safety protocols
- Internal calibration policies

8. Revision History

Version	Date	Description	Author
1.0	2024-06-11	Initial Issue	[Your Name]