SOP Template: Standardized Sampling and Testing Procedures

This SOP establishes **standardized sampling and testing procedures** to ensure consistency, accuracy, and reliability in sample collection and analysis. It covers proper sample identification, handling, preservation, transport, and detailed testing methodologies to maintain data integrity and compliance with quality standards. The objective is to minimize variability and errors, enabling precise and repeatable results for informed decision-making and regulatory adherence.

1. Purpose

To define the procedures for sample collection, identification, handling, preservation, transportation, and testing to ensure data integrity and compliance with regulatory and internal quality standards.

2. Scope

This SOP applies to all personnel involved in sampling and testing processes within the laboratory or field operations.

3. Responsibilities

- **Laboratory/Field Personnel:** Follow standardized procedures for sampling and testing.
- **Supervisors/Managers:** Ensure proper training, adherence to SOP, and review of results.
- **Quality Assurance:** Conduct audits and reviews of records for compliance.

4. Procedure

1. **Sample Collection**
   - Use appropriate, clean, and sterilized sampling equipment.
   - Follow the designated sampling plan regarding sample size and location.
   - Immediately label the sample with a unique identifier, date, time, and collector's initials.
2. **Sample Handling and Preservation**
   - Transfer samples into designated containers with minimal exposure to contamination.
   - Apply required preservation procedures (e.g. refrigeration, chemical preservatives) as specified in the sampling protocol.
3. **Sample Transport**
   - Transport samples to the laboratory or analysis site promptly, maintaining prescribed temperature and handling conditions.
   - Log chain-of-custody records for all transfers and handling.
4. **Sample Receipt and Storage**
   - Upon receipt, verify sample integrity and documentation.
   - Record conditions and any deviations on the sample log.
   - Store samples as per required specifications until analysis.
5. **Testing Procedures**
   - Follow standardized test methods specific to the sample type (reference applicable test method SOPs or standards).
   - Record all observations, measurements, calculations, and deviations.
6. **Reporting and Documentation**
   - Complete all records in permanent ink or electronic system with audit trails.
   - Generate and review reports before submission or filing.
   - Maintain records as per regulatory and organizational requirements.

5. Documentation

Record	Retention Period	Location
Sample Log	5 years	Laboratory Records Room
Chain-of-Custody Forms	5 years	Quality Management Office
Test Reports	Permanent	Electronic Data Management System

6. References

- Relevant national and international standards (e.g. ISO, ASTM, EPA)
- Internal Laboratory Quality Manuals

7. Revision History

Date	Version	Description	Approved By
2024-06-01	1.0	Initial issuance	QA Manager