Standard Operating Procedure (SOP)

Sample Selection and Handling Instructions

This SOP details **sample selection and handling instructions** to ensure the integrity and reliability of samples collected for analysis. It includes guidelines for proper sample identification, collection techniques, preservation methods, and transportation procedures. The objective is to minimize contamination, degradation, and errors during sample processing, thereby maintaining the accuracy of subsequent test results and analyses.

1. Purpose

To establish a standardized procedure for selecting, labeling, handling, preserving, and transporting samples for analysis.

2. Scope

This SOP applies to all staff involved in sample collection and handling in the laboratory or field settings.

3. Responsibilities

- Personnel must follow this SOP and report any deviations immediately.
- Supervisors must train staff and ensure compliance with the instructions outlined herein.

4. Definitions

Term	Definition
Sample	A portion or quantity of material selected for analysis to represent the larger population.
Preservation	Methods or processes used to maintain the sample's original condition until analysis.

5. Procedure

1. **Sample Selection:**
    - Select samples using the designated sampling plan or protocol.
    - Ensure samples are representative of the batch, lot, or area in question.

2. **Sample Identification and Labeling:**
    - Label containers immediately after collection with:
        - Sample ID/code
        - Date and time of collection
        - Collector's name or initials
        - Sampling location
    - Use waterproof labels and indelible ink.

3. **Sample Collection Techniques:**
    - Use clean, sterile, or appropriate equipment depending on the sample type.
    - Avoid sample contamination by wearing gloves and using appropriate PPE.

4. **Sample Preservation:**
    - Follow relevant preservation methods (e.g., refrigeration, freezing, chemical preservatives), as required by the analysis type.
    - Document preservation method in the sample log.

5. **Sample Transportation:**
    - Transport samples in appropriate containers to prevent leaks, spills, and contamination.
    - Maintain required temperature and storage conditions during transport.
    - Deliver to the analytical facility as soon as possible.

6. **Documentation:**
    - Complete sample logs, chain of custody forms, and any relevant documentation at the time of collection and transfer.
    - Retain all documentation as per record-keeping requirements.

6. References

- Relevant regulatory and industry guidelines for sample handling (e.g., ISO, ASTM)
- Internal laboratory protocols

7. Revision History

Version	Date	Description of Change	Approved By
1.0	2024-06-30	Initial release	Lab Manager