

# SOP: Blood Storage and Handling Requirements

This SOP details the **blood storage and handling requirements**, encompassing proper collection techniques, temperature control during storage, labeling and documentation protocols, contamination prevention measures, and guidelines for safe transportation. The objective is to maintain blood sample integrity, ensure accurate test results, and comply with regulatory standards for biological specimen handling.

## 1. Purpose

To define procedures for the storage, handling, and transportation of blood specimens to ensure integrity, reliability of test results, and regulatory compliance.

## 2. Scope

This SOP applies to all personnel involved in the collection, handling, storage, and transportation of blood samples in clinical and laboratory settings.

## 3. Responsibilities

- **Laboratory Personnel:** Handle, label, and store blood samples as per procedure.
- **Supervisors:** Ensure compliance and provide training.
- **Transport Staff:** Follow transportation guidelines and maintain documentation.

## 4. Procedure

### 1. Specimen Collection

- Use sterile, single-use collection devices.
- Follow proper venipuncture technique to avoid hemolysis or contamination.
- Immediately mix specimens with required anticoagulant if applicable.

### 2. Labeling and Documentation

- Label tubes with patient ID, date/time of collection, collector's initials, and test ordered.
- Complete appropriate documentation and chain-of-custody forms.

### 3. Storage Requirements

Sample Type	Temperature Range	Max Storage Duration
Whole Blood (EDTA)	2â€“8°C	24â€“48 hours
Serum/Plasma	2â€“8°C	Up to 72 hours
Frozen Plasma/Serum	≤ -20°C	As per test requirement (weeks to months)

### 4. Contamination Prevention

- Wear appropriate PPE (gloves, lab coats, etc.).
- Disinfect work areas before and after handling.
- Dispose of all used materials in biohazard containers.

### 5. Transportation

- Transport in insulated, leak-proof containers.
- Maintain temperature requirements during transport using ice packs or cool packs as necessary.
- Document transfer details (time, conditions, transporter's ID).

## 5. Quality Control

- Regularly calibrate and monitor temperature of storage equipment.
- Perform periodic audits of labeling and documentation accuracy.

## 6. References

- WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy
- CLSI GP44 â€“ Procedures for the Handling and Processing of Blood Specimens
- Local regulatory and institutional requirements

## 7. Revision History

Version	Date	Description	Author/Editor
1.0	2024-06-27	Initial SOP creation	Laboratory QA Team