

Specimen Collection and Preparation

Laboratory test results are dependent on the quality of the specimen submitted. It is important that all specimens and request slips be properly labeled with the name of the patient, collection date, and the origin (source) of the specimen, when applicable.

To help ensure patient identification, please make sure that the patient name and date of birth is clearly marked on the specimen, whether by your institution's own label, or hand-labeled.

If there is any doubt or question regarding the type of specimen that should be collected, please contact the laboratory performing the test at:

- Rapid City Regional Hospital Laboratory: 605-755-8080
- Spearfish Regional Hospital Laboratory: 605-644-4007
- Sturgis Regional Hospital Laboratory: 605-720-2566
- Lead/Deadwood Regional Hospital Laboratory: 605-755-6116
- Custer Regional Hospital Laboratory: 605-673-2229

Blood Collection

Most laboratory tests are performed on anticoagulated whole blood, plasma, or serum. In general, specimens should be refrigerated until placed in the courier box for transport to the laboratory. Please see our individual test directory section for specific requirements.

- **Plasma:** Draw a sufficient amount of blood with indicated anticoagulant to yield necessary plasma volume. Gently mix blood collection tube by inverting 6 to 10 times immediately after draw. If required, separate plasma from cells by centrifugation within 20 to 30 minutes.
- **Serum:** Draw a sufficient amount of blood to yield necessary serum volume. Allow blood to clot at ambient temperature, and then, separate serum from clot by centrifugation within 20 to 30 minutes. Caution: Avoid hemolysis.
- **Whole Blood:** Draw a sufficient amount of blood with indicated anticoagulant. Gently mix blood collection tube by inverting 6 to 10 times immediately after draw.

Specimen Collection Tubes Available

The following is a list of tubes referred to in Regional Health Laboratories' specimen requirements:

- **Dark Green-Top (Lithium Heparin) Tube:** This tube contains sodium heparin—used for the collection of heparinized plasma or whole blood for special tests.
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Grey-Top (Potassium Oxalate/Sodium Fluoride) Tube:** This tube contains potassium oxalate as an anticoagulant and sodium fluoride as a preservative—used for some special chemistry tests.
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Lavender-Top (EDTA) Tube:** This tube contains EDTA as an anticoagulant—used for most hematological procedures and larger tubes are hand-labeled and used for immunohematology (Blood Banking).
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Light Blue-Top (Sodium Citrate) Tube:** This tube contains sodium citrate as an anticoagulant—used for drawing blood for coagulation studies.
Note: It is imperative that tube be completely filled. Ratio of blood to anticoagulant is critical for valid prothrombin time results. Immediately after draw, invert tube 6 to 10 times in order to activate anticoagulant.
- **Light Green-Top (Lithium Heparin) Tube:** This tube contains lithium heparin—used for the collection of heparinized plasma or whole blood for special tests.
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Pink-Top (EDTA) Tube:** This tube contains EDTA as an anticoagulant—used for most hematological procedures and larger tubes are hand-labeled and used for immunohematology (Blood Banking).
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Red-Top Tube:** This tube is a plain VACUTAINER® containing no anticoagulant—used for collection of serum for selected chemistry tests.
- **Serum Gel Tube:** This tube contains a clot activator and serum gel separator—used for various laboratory tests.
Note: Invert tube to activate clotting, let stand for 20 to 30 minutes before centrifuging for 10 minutes. If frozen serum is required, pour off serum into plastic vial and freeze. Do not freeze VACUTAINER®.