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Client Service Manual

A Laboratory Handbook on Specimen Collection for the Medical Professional



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INTRODUCTION

The major function of the clinical laboratory is the determination of valid data by analytic procedures performed on patient specimens and the timely communication of this data to the physician.

Clinical laboratories have recognized for many years that the quality of their laboratory results, the data which provides information for diagnosis and treatment of patients, is directly affected by the quality of the collected specimen.

One very important factor in the quality of the specimen is the use of the proper specimen container for the collection of a particular laboratory test.

This handbook was compiled to assist you, the medical professional, with the selection of the proper collection tube or container, the amount of required sample, proper preservative and special handling procedures in the collection process.

REQUIREMENTS FOR A QUALITY SPECIMEN

1. The patient is prepared properly, and medication interference is avoided, if possible.
2. The correct specimens are collected from the correct patients with the proper labeling. Because it is the policy of most clinical laboratories to discard specimens that are unlabeled or labeled incorrectly, the person collecting the specimens must abide by the written policy describing acceptable identification of specimens. The potential errors in after-the-fact re-identification of a specimen can be extremely detrimental to patient care and must be avoided.
3. The correct anticoagulants and preservatives are used with a sufficient amount of specimen collected.
4. The specimens are not hemolyzed.
5. The fasting specimens are collected in a timely fashion and verified as fasting specimens.
6. Timed specimens are correctly timed and documented.
7. Specimens collected without anticoagulants need to stand a minimum of 30 minutes for proper clot formation to occur.

8. Specimens collected with anticoagulants are rocked gently (**NOT SHAKEN**) back and forth several times to mix specimen with the anticoagulant.
9. Collected specimens are transported to the laboratory in a timely fashion to maintain specimen integrity.
10. Most samples collected for Chemistry Testing must be received in the LAB within 2 hours of collection; however, K⁺, Phosphorus, & CO₂ must be received in the lab within 45 minutes of collection.
See the Section of COMMONLY ORDERED TESTS for specifics on each test.

SUBMITTING SPECIMENS TO THE LABORATORY

The following are a few of the safety policies to follow when drawing blood from patients. They are designed to protect you and the patient. They also protect the Laboratory staff if followed.

Wash your hands between individual patients.

Wear gloves when collecting any specimen including when performing phlebotomy.

After collecting proper specimens and **assuring** that the container **lid is in place, remove** gloves and dispose of them properly. Label the container with:

- **Patient's Full Name (Required)**
- **Date and Time of Collection (Required)**
- **Initials of Person Collecting Specimen (Required)**
- **Blood bank wristband ID (Required for Type and Screens with or without Crossmatches)**
- **Type of Specimen (Important on certain fluids)**
- **Physician's Name (optional)**
- **Test or Tests Requested (optional)**

Place properly labeled specimen into a secondary leak proof container or plastic re-closeable bag. Either container must have a biohazard symbol on the outside. These are available from the laboratory.

Properly complete a requisition slip and make sure to include contact information should the results of the specimen have critical value. Place in side pocket of the biohazard bag. If a secondary container other than the biohazard bag is used, the request slip must be properly protected to prevent contamination. Forward specimen to lab for analysis **ASAP!**

DIRECTORY OF TUBES USED

Lavender Top- Contains EDTA anticoagulant. This tube is used to perform cell counts and tests requiring whole blood. Gently invert 5-10 times immediately after collection.

Light Blue Top- Contains Buffered Sodium Citrate anticoagulant. Used to perform tests requiring plasma for clotting factors. Gently invert 4-5 times immediately after collection.

Green Top- Contains Lithium Heparin or Sodium Heparin anticoagulant. Used to obtain plasma for testing. Gently invert 5-10 times immediately after collection.

Pink Top- Contains K2EDTA anticoagulant. This tube is used to perform blood banking and transfusion services. Gently invert 8-10 times immediately after collection.

Plain Red Top- Contains no additive. Used for obtaining serum for testing. Used for therapeutic drugs and blood banking.

Gray Top Tube- Contains potassium oxalate as an anticoagulant and sodium fluoride as preservative and is used to preserve glucose in whole blood and for some special chemistry test. Gently invert 5-10 times immediately after collection.

Red/gray tube, also known as **Tiger Tube**- contains a clot activator. It is used to separate blood from the serum. Gently invert 5-10 times immediately after collection.

ORDER OF DRAW FOR COLLECTION TUBES

Color	Additive	Special Handling
Blood Cultures Bottles	Varies	Contact Lab
Light Blue	Sodium Citrate	Invert 4-5 times
Red	Clot Activator	Invert 5-10 times
Tiger Top/ Gold Top	SST	Invert 5-10 times
Light Green	Lithium Heparin	Invert 5-10 times
Dark Green	Sodium Heparin	Invert 5-10 times
Lavender	EDTA	Invert 5-10 times
Pink	K2EDTA	Invert 8-10 times
Gray	Sodium Fluoride	Invert 5-10 times
Yellow	ACD Solution	Invert 5-10 times

Commonly Ordered Tests Performed at Southwest Arkansas Regional Medical Center Laboratory

<i>Test Name</i>	<i>Specimen Tube</i>	<i>After Collection, must be Rec'd in lab within</i>	<i>Special Instructions</i>
ABO, RH typing Blood Bank Testing	1 Pink Top, 1 Lavender Top, 1 Red Top	Contact Lab	Special Blood Bank collection must be followed, call Lab for more information
Acetaminophen	1 Red Top or Green Top	2 hours	
Albumin	1 Gold Top or Green Top	2 hours	
Alkaline Phosphatase	1 Gold Top or Green Top	2 hours	
Amylase	1 Gold Top or Green Top	2 hours	
Antibody Screen Blood Bank Testing	1 Pink Top, 1 Lavender Top, 1 Red Top	Contact Lab	Special Blood Bank collection must be followed, call Lab for more information
ALT	1 Gold Top or Green Top	2 hours	
AST	1 Gold Top or Green Top	2 hours	
Basic Metabolic Panel	1 Gold Top or Green Top	45 MINUTES	
Bilirubin Total	1 Gold Top or Green Top	2 hours	Protect from light
BUN	1 Gold Top or Green Top	2 hours	
Calcium	1 Gold Top or Green Top	2 hours	
Cardiac Profile	1 Gold Top or Green Top	2 hours	Includes: Troponin, CKMB, CK
CBC with Diff	1 Lav Top	24 hrs. at Room Temp.	
Clostridium difficile	2 mL unformed stool	Refrigerated up to 5 days	Best if tested immediately & not stored longer than necessary

Cholesterol	1 Gold Top or Green Top	2 hours	
Comprehensive Metabolic Panel	1 Gold Top or Green Top	<u>45 MINUTES</u>	
Covid/SARS Rapid Antigen test.	1 swab	ASAP	See lab for correct swab
CPK	1 Gold Top or Green Top	2 hours	
Creatinine	1 Gold Top or Green Top	2 hours	
Depakene/Valproic Acid	1 Red Top or Green Top	2 hours	
D dimer	Light Blue	3 hours	Must be filled precisely to the indicated arrow or fill line.
Electrolytes	1 Gold Top or Green Top	<u>45 MINUTES</u>	
T4	1 Red Top	2 hours	
Gastric Occult Blood	Emesis	Contact lab	
Glucose	1 Gold Top or Green Top	2 hours	
Hemoglobin/Hematocrit	1 Lav	24 hrs. at Room Temp	
Hepatic Function Panel	1 Gold Top or Green Top	2 hours	Protect from light
Influenza A & B Rapid Antigen test.	1 swab	ASAP	See lab for correct swab
Lactic Acid	Specimens drawn off- site not accepted.	Specimens drawn off-site not accepted.	Time Sensitive Test
Lipid Panel	1 Gold Top or Green Top	2 hours	
Magnesium	1 Red Top or Green Top	2 hours	
Occult blood fecal	Stool	10 days on slide	
Phosphorus	1 Red Top or Green Top	2 hours	
Potassium	1 Gold Top or Green Top	2 hours	
Pregnancy Test, Serum	1 Red	2 hours	
Pregnancy Test, Urine	Urine	Refrigerate	
Protein, Total	1 Gold Top or Green Top	2 hours	
PT/INR	Light Blue	24 hrs at RT	Must be filled precisely to the indicated arrow or fill line.
PTT	Light Blue	3 hours	Must be filled precisely to the indicated arrow or fill line.
Strep Screen	1 Swab	*Contact Lab	Contact Lab for proper swab
Renal Panel	1 Gold Top or Green Top	2 hours	
RSV	1 swab	*Contact Lab	Contact Lab for proper swab
Salicylates	1 Red Top or Green Top	2 hours	
Sed Rate (ESR)	1 Lav	4 hours	
Sodium	1 Gold Top or Green Top	2 hours	
Triglycerides	1 Gold Top or Green Top	2 hours	
Urinalysis with Microscopic	Urine	2 hours unrefrigerated	
Vancomycin	1 Gold Top or Green Top	2 hours	
WBC count	1 Lav	24 hrs at RT	

For any Tests NOT LISTED, contact the Lab for Specimen Requirements.

Commonly Ordered Cultures

***Blood Cultures sent to LabCorp; all other cultures sent to BioMedix**

<i>Test Name</i>	<i>Collect in:</i>
Anaerobic Culture	E swab
Blood Culture	Contact lab
Respiratory Panel PCR	E swab
UTI Panel	Sterile Container
Stool Culture	Sterile Container or ParaPak C&S

For any Tests NOT LISTED, contact the Lab for Specimen Requirements.

Instructions for 24-Hour Urine Collection

Obtain container from laboratory.

1. Void completely before beginning collection.
2. Note time and write on label.
3. Collect all urine specimens completely for the next 24 hours and add to collection container. Refrigerate the entire specimen during the 24-hour period.
4. At the end of the 24-hour period, empty bladder, add to container. Transport to lab as soon as possible.

24 Hour Urines (Sent Out to Ref Lab)

1. Amylase
2. Creatinine
3. Creatinine Clearance (Must have height and weight) & serum tube
4. Potassium
5. Sodium
6. Total Protein
7. Others, on Request (Contact Lab before collection)

Any tests not listed in this handbook call Southwest Arkansas Regional Medical Center Laboratory at 870-722-3880 for specimen requirements.