



CONSOLIDATED LABORATORY SERVICES
"Continued Commitment to Quality and Service"

Reference Manual

February 2011

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The most current version of our Reference Manual is dated "February, 2011". This manual supersedes any other printed materials and is a complete replacement for any previous Reference Manual.

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CONTACT DIRECTORY

Main Number

(904) 308-5600

Our automated phone menu provides quick access to most Consolidated Laboratory Services' departments. Please listen to our current service options by calling our main number.

Clinical Consultations

St. Vincent's Medical Center Pathologists
(904) 308-3800

Consolidated Laboratory Services Website

Visit our website at <http://www.conlabs.com> to view technical updates, Patient Service Center locations, Insurance list and other current information.

INTRODUCTION

Consolidated Laboratory Services is a comprehensive laboratory, servicing physician and medical facilities throughout northeast Florida and southeast Georgia.

Consolidated Laboratory Services' team is committed to providing a high quality, cost-effective and responsive service through a unique ability to meet the needs of our customer.

Accreditation and Licensure

The laboratory is accredited by:

The College of American Pathologists Commission on Laboratory Inspection and Accreditation
The Joint Commission on Accreditation of Health Care Organizations
American Association of Blood Banks.

The laboratory is licensed by:

State of Florida Agency for Health Care Administration (AHCA)
Clinical Laboratory Improvement Amendments of 1988 (CLIA)

The laboratory is recognized by the College of American Pathologists Quality Evaluation Program and the American Society of Clinical Pathologists Check Sample Program.

Pathologist Consultation

Consolidated Laboratory Services is staffed by six pathologists holding board certifications in Anatomic, Clinical, Cyto, Dermato, Immuno, and Radioisotopic Pathology. Our unique pathology structure allows us to provide both superior staffing and timely reporting.

Brian H. Vitsky, M.D. (CLS Medical Director)
Don B. DeStephano, M.D.
Brett B. Cantrell, M.D.

Ricardo R. Ramos, M.D.
Anne Bernstein, M.D.
Michael B. Lehman, M.D.

Unlike large national laboratories, our pathologists are readily available to assist with questions regarding test results and procedures, consult on unusual cases, or arrange special studies.

Quality Assurance

The laboratory is subject to stringent internal and external quality control programs. A planned systematic process is utilized for monitoring, evaluating, and continually improving the quality of laboratory services.

Testing Capabilities

Over 95% of all testing is performed in-house on the St. Vincent's Medical Center campus. Testing availability includes the following specialties:

Clinical Chemistry
Cytology
Hematology

Immunology
Microbiology
Serology

Special Chemistry
Surgical Pathology
Toxicology

Transfusion Services
Virology

Certain highly specialized or unusual tests are referred through special networking to a reputable and fully licensed reference laboratory.

SERVICES

Courier Services

Our team of professional, courteous Customer Service Representatives (Couriers) is available to provide specimen pickup and delivery of results and supplies. Our courier services may be tailored to meet individual customer needs.

Reporting

Specimens are processed continually upon arrival in the laboratory. Most routine results are available within 24 hours and most STAT results are available within hours of specimen receipt. Reporting schedules may vary, however, depending upon the complexity of the test requested and the time required for its determination.

Supplies

Consolidated Laboratory Services will provide all supplies necessary in the collection of specimens for testing at our laboratory. For prompt delivery, submit a completed CLS supply requisition form to your CLS courier or fax the completed form to (904) 296-1587.

Technical Assistance

Client Relation Representatives are available to assist with questions concerning reports, specimen requirements, and testing schedules.

SPECIMEN COLLECTION AND HANDLING

Consolidated Laboratory Services (CLS) will provide all supplies necessary in the collection of specimens for testing at our laboratory. A wide variety of test tubes and other collection devices are available on the market. Please be certain to use the specific container listed in this manual as our requirements may differ from other reference laboratories.

Positive patient identification is a vital part of high quality patient care. Special attention must be paid to label all specimens with patient name, **date, and time of collection**.

The quality of the information obtained from a laboratory test depends to a considerable extent on correct handling of the specimen submitted for analysis. While most people are aware that proper collection affects testing, many are not aware that specimen handling and centrifugation, when required, are essential factors in obtaining accurate test results. Some specimens may require refrigeration while others require room temperature. Specimens that require freezing should be frozen immediately after collection. Please refer to the specific requirements listed in this manual.

Results from samples with possible integrity issues will be notated on the patient report by one of the following;

- Samples received in our lab with a date/time of collection greater than 24 hours of receipt will have the following message appended to the report: **“Specimen collection date and time exceeds 24 hours of receipt date and time; therefore the accuracy of the results may be questionable. Any critical values associated with this specimen will be called between the hours of 8am to 5pm. Clinical correlation is necessary for interpretation.”**
- Samples received in tubes that were unspun or with visible cellular contamination will have the following message appended to the report; **Specimen received unspun or showed poor separation from red cells; therefore, the accuracy of the results may be questionable. Any critical values associated with this specimen will be called between the hours of 8am to 5pm. Clinical correlation is necessary for interpretation.”**
- Samples without any date or time of collection will have the following message appended to the report; **“Specimen collection date/time is unknown; specimen integrity can not be assured. Date of receipt used as default.”**

The following is a list of the most common specimen types and requirements specific to their collection.

BLOOD

In order to assure specimen integrity, the correct tube type and volume of sample must be submitted. Vacuum tubes are color coded and designed to automatically draw the proper amount of specimen into the tube. For testing purposes, blood components are described in one of three ways:

PLASMA

Blue top vacuum tubes are the primary tubes used for collecting plasma. It is extremely critical that these tubes be allowed to fill to the exhaust of the vacuum. After collecting, tubes must be mixed by gently inverting 8-10 times. Do not shake since this may cause hemolysis and render the specimen unacceptable for testing.

Other tubes used for collecting plasma specimens include gray top (sodium fluoride) tubes; green top (sodium or lithium heparin) tubes; and royal blue (EDTA) tubes used primarily for the collection of heavy metals.

SERUM

Red top vacuum tubes contain no anticoagulant and are used to collect serum samples. Serum should be properly centrifuged and physically separated from contact with cells **as soon as possible**. A maximum limit of **TWO HOURS** from the time of collection is recommended. Analysis adversely affected by delayed separation includes glucose (decreased), potassium (increased), and LDH (increased). CLS provides two unique types of red top tubes as described below. Please consult the specific test requirement for each test.

Gel Barrier Tube

During centrifugation, the gel will float to the area between the cells and serum to form a barrier. This barrier is critical to maintaining the integrity of the serum sample. CLS provides only VACUETTE® brand gel barrier tubes. This tube type offers many important features to our clients: the tube does not need to be opened prior to centrifugation; time is saved in that serum does not need to be removed and placed into a separate tube, and the closed system reduces biohazard contamination risks. Note – these tubes are unacceptable for ABO/Rh typing, drugs of abuse screening and most therapeutic drugs. When using gel-barrier tubes please collect and process as described below:

Procedure for Centrifugation of Gel Barrier Tubes

1. After the specimen is collected, slowly invert VACUETTE® gel barrier tube 6-8 times to insure proper mixing of clot activator. This minimizes latent fibrin formation in serum.
2. Blood should sit upright at least 20-25 minutes before centrifugation to form a clot.
3. Tilt the tube gently after sitting to check that clot is formed and loose.
4. Balance the centrifuge. Test tubes with equal volumes must be placed opposite each other. (A tube with water can be used for accurate balancing.)
5. Spin for 10-15 minutes at a minimum of 2500 RPM's. The stopper should remain on the tube.
6. After centrifugation, gently invert the tube 2-3 times to ensure that a complete barrier has formed between the red cell clot and serum.
7. If serum still contains RBC's, respin the specimen.

Plain Red Top Tube

This tube type contains no gel barrier and is predominantly used for ABO/Rh testing, drugs of abuse screening and some referred analytes. Unless otherwise instructed in the specific test requirement, do not spin down the tube – remove the stopper, or manipulate the specimen in any other manner.

Whole Blood

Purple top (EDTA K3) tubes are the primary tubes used for collecting whole blood. Tubes should be allowed to fill to the exhaust of the vacuum. After collecting, tubes must be mixed by gently inverting 8-10 times. Do not shake since this may cause hemolysis and render the specimen unacceptable for testing. Store and transport as described under the specific test requirements.

BLOOD CULTURES

Routine blood culture collection consists of one blue aerobic bottle and one purple anaerobic bottle. These bottles contain a vacuum and should not be vented before collection. Specialized blood culture bottles are available upon request, including low-volume pediatric bottles.

Collection Technique

1. Disinfect the top of aerobic and anaerobic blood culture bottles with alcohol.
2. Apply tourniquet and locate vein for venipuncture. Release tourniquet during skin disinfection procedure.
3. Using 70% alcohol, scrub the site vigorously for 1 minute. Allow to air dry.
4. Apply a thick film of tincture of iodine or Betadine in concentric circles moving outward. Allow to air dry for at least 1 minute. Do not touch prepared site after this cleansing.
5. Reapply tourniquet and collect blood.
6. For adults, inoculate 8-10 ml of blood into each bottle. If only enough blood is obtained for one bottle, inoculate the blue aerobic bottle. Note: 10 ml of blood/bottle is required for optimal recovery of pathogens.
7. Check the venipuncture site and remove iodine from patient's arm with an alcohol pad.

BODY FLUID

Fluids submitted in a syringe will clot before arriving in the laboratory. This may render the specimen unacceptable for testing. Transfer the fluid to the appropriate collection tube(s) for the desired tests(s) immediately after drawing (see specific test requirements.) **Do not transport syringe with the needle attached.** Specimens submitted in this manner are considered hazardous and will be rejected for testing.

CYTOLOGY / HISTOLOGY

Specimen requirements and information concerning cytology and histology specimens are included in the Cytology/Surgical Pathology section following the Alphabetical Listing of Tests.

MICROBIOLOGY

Specimen requirements for cultures and smears are included with individual test listings. See Microbiology section following the Alphabetical Listing of Tests.

SEMEN

Semen Analysis: Collect the specimen in a sterile container and maintain at body temperature. Immediately deliver the specimen to the lab, located on the third floor of the Clinical Services Building (above the Emergency Room) at St. Vincent's Medical Center. The lab must receive the specimen within one hour of collection. The specimen must be in the lab between 6:30am & 1:00pm, Monday through Friday. Physician order and supplemental semen analysis form must accompany the specimen.

Post Vasectomy Sperm Count: Collect the specimen in a sterile container. The specimen can be no more than 5 hours old and must be taken immediately to the lab, located on the third floor of the Clinical Services Building (above the Emergency Room) at St. Vincent's Medical Center. The specimen must be in the lab between 6:30am & 8:00pm Monday through Friday.

URINE

Random Collection: The first voided morning specimen is preferred for most tests, since it is usually the most concentrated, has a more uniform volume, and lower pH. Consult the individual test listing in this manner for specimen volumes. Refrigerate the urine until it is transported to the laboratory.

Timed Collection: Many analytes require preservatives to maintain their viability during urine collection. Preservatives also reduce bacterial growth and urine oxidation, which causes pH deterioration. Certain preservatives will burn the skin on contact. Never allow a patient to urinate directly into a receptacle containing a preservative. When a preservative is being used, always instruct the patient to urinate into a secondary receptacle. Next, pour the urine into the container with preservative. When collecting any "timed" urine specimen, it is essential that all urine be saved. Any urine lost for any reason will alter test results.

Urine Collection, 24-hour:

1. Discard the first morning specimen on day one.
2. Collect all specimens during the remainder of the day and evening.
3. Collect the first morning specimen on day two.
4. Stop collection.
5. Label the container(s) with patient's full name, date, and time of collection. This presumes that time of waking is the same on days one and two.

Normal fluid intake is allowed during 24-hour collections. Dietary restrictions are required for some procedures and are specified in the individual test listing. The Creatinine Clearance test requires the patient's height and weight for estimate of body surface area along with a blood sample for serum creatinine.

NOTIFYING CLIENTS REGARDING SPECIMEN PROBLEMS

Proper specimen procurement and handling are an essential part of obtaining valid, timely laboratory test results. All specimens delivered to the laboratory must meet the defined criteria for identification, collection, volume, and testing in order to be processed. If any criterion is not met, the physician's office will be notified so that corrective action can be taken. CLS has found that notifying clients via hard copy laboratory report is the most standardized and efficient practice. This allows the client to focus on only one document – the patient's report – for both clinical results and specimen problem notification. Once the patient report is received in your office, staff can quickly scan the document for abnormal values and/or the need for any additional follow-up that may be necessary.

CLS has developed a number of detailed messages that are designed to clearly communicate the type of problem and the steps your office may need to take to obtain valid results.

Specimens that need additional information from the client:

- 1. Unclear Orders**
On occasion, test orders are submitted using terminology not recognized by our technical staff. To ensure we order the correct test, a "Unclear Orders" message will print at the end of the patient report. Included in the message is the test name that is unclear to our laboratory. Detailed instructions are provided asking office staff to either call or fax clarification to our Customer Call Center as soon as possible so testing can begin. Prompt response to this message will decrease the need for patient recollection, as most specimens are stable for at least 24 hours after collection.
- 2. No Orders**
Test request forms are occasionally received that either do not have any orders marked or do not have a test marked that corresponds to the specimen type sent by the collection facility. A detailed message is provided at the end of the report describing the specimen type received in the lab along with instructions for adding orders, if necessary. Prompt response to this message will decrease the need for patient recollection, as most specimens are stable for at least 24 hours after collection.
- 3. Incomplete Requisitions**
At a minimum, test requisitions must contain the patient's first and last name, as well as date of birth. If date of birth or gender is not provided, the default setting (124 year old unknown) may be used to release patient results, or the report may indicate the need to provide accurate data before testing can begin.
- 4. Supplemental Testing Information**
Certain tests may require your office to submit specific patient information to perform the test. In many cases, a supplemental form is required to ensure that your office provides all necessary patient data. Examples of tests requiring a supplemental form include; Triple Screen, Quad Screen, Cystic Fibrosis Screen, and Semen Analysis. Forms are available through our supply line or by contacting your Sales/Service Representative.

Specimens classified as recollect:

- 1. Inadequately Labeled**
A specimen is considered **unlabeled** if the specimen (test tube, urine cup, specimen swab, etc) does not have the patient's first and last name directly affixed to it. If pre-printed labels are used, the label must be applied directly to the specimen before it is placed inside the plastic transport bag. It is not acceptable to affix the label to the bag rather than the container.

A specimen is considered **mislabelled** if the name written on the container differs from the name on the requisition. If a specimen consists of multiple containers (e.g., different tube types) and only one or some of the container labels match the associated requisition, the laboratory may be unable to determine which of the labels is correct and all containers may be treated as mislabeled.

In addition, some testing (drug screens, HIV studies, and blood bank testing) requires an exact match between specimen and requisition; any variation will require recollection, or in some instances, physician authorization must be obtained before testing can be finalized.

2. **Incomplete or Missing Requisitions**
Specimens submitted without a requisition or without the patient's complete first and last name may be rejected.
3. **Unsatisfactory or Suboptimal Specimens**
A specimen is unsatisfactory or suboptimal if it is collected, handled, or transported in such a way that the substance or constituents of interest cannot be accurately measured or counted in the clinical laboratory.
 - a. Specimen collected in wrong tube, container, or preservative.
 - b. Specimen inappropriately handled with respect to temperature, timing, or storage requirements.
 - c. Specimen is hemolyzed. This occurs when erythrocytes (RBC's) are ruptured, releasing their contents into the serum or plasma portion of the blood. The slightest degree of hemolysis will invalidate many test results, particularly potassium and LDH. Hemolysis may occur with even the slightest trauma to the specimen. This may be caused by one or more of the following:
 - ◆ difficult phlebotomy
 - ◆ small lumen needle used to obtain specimen(s)
 - ◆ vigorous shaking of specimens
 - ◆ storing in a refrigerator that is too cold
 - ◆ freezing specimens which contain red blood cells
 - ◆ centrifuging specimen before it has clotted
 - d. Specimen is lipemic. This describes specimens that are cloudy or milky due to the presence of excessive amounts of fat. If blood samples are taken too soon after the patient has eaten, lipemic specimens may occur. Lipemia will invalidate many test results. Therefore, it is recommended that the general rule of "fasting before sampling" be followed.
 - e. There are some clinical pictures that present with lipemia as part of the expected findings. For these specimens, and where an overnight fast was not possible before phlebotomizing the patient, the laboratory is equipped to clear the sera using special equipment. If enough serum specimen is submitted (minimum – 3 mL), it will be ultracentrifuged. This centrifuge provides enough centrifugal force to separate the fat particles, leaving clear serum to be used for testing.
 - f. Specimen volume is insufficient. Quantity not sufficient (QNS) is the laboratory's way of saying there was not enough specimen to perform the test(s) requested. We are very aware that the specimen(s) we receive are in many cases all that could be obtained from the patient. Every effort is made to handle and test these specimens carefully and accurately.
 - g. Specimens received uncentrifuged or poorly centrifuged. (See page 7 – Procedure for Centrifugation of Gel Barrier Tubes – for processing guidelines.)

Specimens Which Pose Hazardous Handling Conditions

Any specimen submitted in a manner that could create a health or safety hazard to laboratory personnel is considered unacceptable. Some examples include, but are not limited to:

1. Specimens submitted in syringes with needles left intact.
2. Specimens submitted in cracked or leaking containers with external contamination.
3. Specimens submitted in tissue paper, diaper, foil, plastic wrap, etc.

TEST REQUISITION FORMS

Consolidated Laboratory Services (CLS) provides test request forms specific to your facility. A form must be completed for each specimen, or group of specimens on the same patient you submit to the laboratory. Test request forms contain one original and three copies. The original and a copy of the test request form must accompany the specimen to the laboratory. You should retain the last copy of this form at your facility to assist in tracking receipt of specimen results. To order a supply of your practitioner's test request forms, please call 308-5600 and listen for the Dispatch prompt.

The following information MUST BE supplied on all test requisition forms;

- ◆ Patient's name – last name, first name.
- ◆ Patient's chart number, social security number, or any other unique identification. (optional)
- ◆ Patient's birth date and gender. This information is necessary to receive age appropriate reference ranges. Cytology, Histology and Blood Bank specimens will not be resultd without this information.
- ◆ Name of referring physician, practicing facility name, and CLS account number. This information should be preprinted on the form. If not, include physician's first and last name, address, phone number and NPI number.
- ◆ **Date and time the specimen is collected.** Check the box indicating whether the patient was fasting or non-fasting.
- ◆ Responsible Party Name.
- ◆ Responsible Party Mailing address.
- ◆ Telephone number of patient or responsible party.
- ◆ Billing information. Provide complete information in the appropriate box(es) based on patient's insurance(s).
- ◆ ICD-9 diagnosis code for each ordered test.
- ◆ Ask patient to review information for accuracy and sign requisition.
- ◆ Test(s) requested. Check the pink box to the **left** of the preprinted test name of the desired test(s) or use the "Comments-Additional Tests" section to write in any additional test(s) needed that is not pre-printed on the form. The "Comments-Additional Tests" section can also be used to note additional information such as:
 - priority handling of the test (STAT)
 - fax requests. Provide ordering practitioner's fax number.
 - "copy-to" requests. The full name, address, city, state and zip code along with the phone and fax numbers must be provided of the "copy-to" practitioner.
- ◆ Source of specimen if submitting a culture sample.
- ◆ Clinical history if submitting Cytology and/or Surgical Pathology specimens. This includes Pap Smears.
- ◆ Physician Signature. This is a mandatory requirement for all Medicare patients per the 11/29/2010 Federal Register release.

BILLING PROCEDURES

Consolidated Laboratory Services offers four alternatives for billing. Based upon your request, we will (1) bill your practitioner's account directly, (Client/Account Billing) (2) bill the patient directly (Self-Pay/Patient Billing) (3) bill a third party when provided with the appropriate information on the test request form, or (4) bill Medicare if the appropriate information is obtained and the ordered test(s) are medically necessary.

Client/Account Billing

An itemized statement will be issued on a monthly basis. The statement will itemize the patient's name, date of service, test(s) ordered and test charges. Payment is expected within 30 days of receipt for the amount indicated on the invoice unless other arrangements have been made in advance. If there are any discrepancies, please contact our billing office promptly so that corrections can be made.

Self-Pay/Patient Billing

Consolidated Laboratory Services offers two options to your self-pay patients. (1) Patients referred directly to our Patient Service Centers for collection and/or processing will receive a 40% discount on all testing. For example; Patient may bring a throat culture collected in your office to one of our patient service centers to receive the reduced discount. Payment will be required at the time services are rendered. (2) Patient samples collected at your office and sent directly to CLS will receive a 10% discount. You must provide the following patient information; patient/responsible party's name, date of birth, address, City, State and Zip Code, telephone number and signature. This information is needed each time a test is ordered. The tests ordered will result in a bill to the patient/responsible party and is due upon receipt. If payment is not received within 30 days, the patient/responsible party will receive reminders of the past due status and subsequent collection activity.

Third Party Billing

Consolidated Laboratory Services is an approved provider for many government and private insurance companies, HMO's, and PPO's. As such, we will directly bill these companies when requested. Please check our current "Approved Insurance List" which is located on our website www.conlabs.com, to be sure that CLS can accept a specific insurance plan before sending the specimen(s) for testing. Depending on the plan, your patient may be responsible for a portion of the charges not covered by the plan.

The following information must be indicated on the test request form to properly bill the insurance plan. If any part of the information is missing, the patient will be billed directly.

- ◆ patient or responsible party's name
- ◆ patient gender
- ◆ patient date of birth
- ◆ patient address, City, State, zip code and telephone number
- ◆ valid ICD-9 diagnosis code for each test ordered
- ◆ patient social security number
- ◆ insurance company name, address, City, State and zip code
- ◆ group number
- ◆ policy number
- ◆ patient signature
- ◆ physician signature

For the patient's convenience, please be sure to include complete and accurate information on each request.

Medicare Billing

Consolidated Laboratory Services is required by law to bill Medicare directly for any laboratory test referred to us by clients other than another laboratory.

Assignment is accepted for all Medicare claims so that the patient is not billed for any unpaid portion. This does not include anatomical pathology requests. Anatomical pathology requests will be filed with Medicare and the patient will be responsible for any uncovered portion.

All tests ordered must include a valid ICD-9 diagnosis code that meets the medical necessity rules of Medicare. Tests that are determined as screening or not meeting medical necessity requirements will be billed to the patient as determined by Medicare. It is YOUR responsibility as the ordering practitioner to inform the patient that these tests will be the patient's responsibility. Please have the patient sign the appropriate line of the Test Request form to signify that they understand they will be billed.

In order to identify patient eligibility for Medicare benefits, the following information is necessary in addition to the information noted above:

- ◆ Patient Medicare HIC number
- ◆ Ordering practitioner NPI number
- ◆ ICD-9 diagnosis code meeting medical necessity rules
- ◆ If necessary, proof of non-coverage notification (ABN)
- ◆ Physician signature

Please be sure to include complete information on each Test Request form in order to prevent time consuming follow-up with your office staff.

Advance Beneficiary Notice (ABN)

Laboratories are asked to analyze patient samples for several reasons:

- for routine screening;
- to help in the diagnosis of the patient's medical condition;
- to monitor an existing medical condition.

All of these are valid reasons to have lab work performed, however not all lab work is considered "medically necessary" under Medicare or TRICARE rules. Some tests are only covered for certain illnesses or conditions; if your patient does not have this illness or condition, Medicare or TRICARE will not pay for the test even though the physician/practitioner considers it necessary.

Based on the test the physician orders, the patient may need to sign an **Advance Beneficiary Notice (of Non-Coverage)**. The purpose of an **ABN** is to clearly inform the patient that Medicare or TRICARE will not pay for a specific test(s), and they will be responsible for the bill. If the patient does not want to be billed, they should sign a "Refusal of Services" statement and the test will not be performed. ABN forms are available to you at no charge.

Offices must avoid having all Medicare and TRICARE patients sign an ABN "just in case". This practice puts the office at risk of allegations of government fraud. Care must be taken to have an ABN completed only for patients whose testing is considered non-covered. The Consolidated Laboratory Services Test Request form strives to alert offices to tests that may qualify for ABN completion. Tests marked with a "@" and/or "%" symbol are our way of letting you know a patient may need to sign an ABN based on medical necessity.

GENERAL INFORMATION

Offices that explain and complete the ABN form prior to sending patients to one of our Patient Service Centers perform an invaluable service to their patient. The patient may have questions as to why a non-covered test is needed, and the only person who can answer their questions is their personal physician.

STAT TESTS

In order to provide physicians with meaningful clinical information in a timely manner, our STAT test menu contains the most common diagnostic tests for a variety of clinical conditions. Our couriers will pick up STAT specimens either from your office or from one of our Patient Service Centers and deliver it directly to the lab for prompt analysis. Most results are available within several hours of collection.

Acetaminophen	D-Dimer	LDH
Acetone, Serum	Digoxin	Magnesium
Alkaline Phosphatase	Dilantin	Monotest
ALT (SGPT)	Direct prep for O & P	Occult blood in feces
Ammonia	Drugs of Abuse @	Osmolality, Serum
Amylase	Electrolyte Panel	Phenobarbital
AST (SGOT)	Ethanol	Phosphorus
Basic Metabolic Panel	Fetal Fibronectin	Potassium
Bilirubin, Total and Direct	Fetal Lung Maturity	PT-INR
Blood Culture*	Fibrinogen	PTT
B-Natremic Peptide	Fibrin Degradation Products	Pus exam on feces
BUN	Gentamycin	Quick Strep Group A on throat specimens
CBC	GGT	RSV antigen detection
Calcium	Glucose	Salicylate
Carbamazepine (Tegretol)	Gram Stain	Sodium
Carbon Dioxide	hCG, qualitative serum	Theophylline
Cell count – CSF and other fluids	hCG, quantitative serum	Tobramycin
Comp Metabolic Panel	India Ink prep on CSF	Troponin
CPK MB Fraction	Influenza A & B Antigen	Uric Acid
CPK, Total	Lactic Acid	Urinalysis or any UA component
Creatinine	Lithium	Valproic Acid
Crystals in fluids	Lipase	Vancomycin

* = Collected STAT, but not performed STAT

@ = Chain of custody specimens not accepted

CRITICAL LABORATORY VALUES

Critical values are those which may be either life threatening or require more immediate medical attention. To allow timely treatment of your patient, Consolidated Laboratory Services will notify your practice by phone whenever one of more of these critical values is obtained. Please note that some critical values will be called only between 8:00am-5:00pm daily.

Parameter	Age Specific	Critical Value	Notes
Absolute Neutrophil Count	0 - 18 yr 18 - adult	< 0.5 K/ul < 1.0 K/ul	8 am -5 pm Daily 8 am-5 pm Daily
Acetaminophen		> 200 ug/ml	
Acid Fast Culture		Positive AFB Stain and/or cult	8 am-5 pm Daily
Aluminum Serum		> 100 ug/L	8 am-5 pm Daily
Alprazolam		> 60 ng/mL	8 am-5 pm Daily
Amiodarone		> 2.5 ug/mL	8 am-5 pm Daily
Amitriptyline + Nortriptyline		> 500 ng/mL (A + NT)	8 am-5 pm Daily
Ammonia	0-16 yr 16-adult	> 99 umol/L > 99 umol/L	
Arsenic Urine or Whole Blood		>150 ug/L	8 am-5 pm Daily
Bilirubin, Total	0-3 mo 3 mo-adult	> 15 mg/dl > 15 mg/dl	8 am-5 pm Daily
Blastomyces Abs CSF		Positive	8 am-5 pm Daily
Blood Culture		Positive Gram Stain and/or culture	
Blood Parasite		Present	8 am-5 pm Daily
Blood Product Contamination		Culture or smear positive	
BUN		> 60 mg/dL	New value. 8 am-5 pm Daily
Cadmium Urine or Whole Blood		> 15 ug/L	8 am-5 pm Daily
Calcium	0-6 mo: 6 mo-adult:	< 6 mg/dl > 13 g/dl < 6 mg/dl > 12 g/dl	
Carbamazepine		> 15.1 ug/ml	
Carbon Dioxide (CO ₂)		< 10 mEq/L > 50 mEq/L	
Coccidioides Abs CSF		Positive	8 am-5 pm Daily
Cerebral Spinal Fluid Cell Count, WBC	0-4 mo: 4 mo-adult:	> 30 WBC/ul > 10 WBC/ul	
Cerebral Spinal Fluid Culture/Stain		Positive Gram Stain and/or culture	
Cholinesterase RBC		< 3500 u/L	8 am-5 pm Daily
Cholinesterase Serum		< 2500 u/L	8 am-5 pm Daily
Clomipramine + Desmethylclomipramine		> 800 ng/mL (C + DC)	8 am-5 pm Daily
Clonazepam		> 80 ng/mL	8 am-5 pm Daily
Clozapine		> 1000 ng/mL	8 am-5 pm Daily
CMV, Rapid CSF Priority		> 200 copies/mL	8 am-5 pm Daily
Dengue		>=1:64 titer	8 am-5 pm Daily
Desethylamiodarone		> 3.5 ug/mL	8 am-5 pm Daily
Desipramine		> 500 ng/mL	8 am-5 pm Daily
Diazepam + Nordiazepam		> 3000 ng/mL (D + ND)	8 am-5 pm Daily
Digoxin		> 2.5 ng/ml	

GENERAL INFORMATION

Parameter	Age Specific	Critical Value	Notes
Dilantin (Phenytoin)		> 30 ug/ml	
Doxepin + Nordoxepin		> 500 ng/mL (D + ND)	8 am-5 pm Daily
EBV, Rapid CSF Priority		> 150 copies/mL	8 am-5 pm Daily
Enterovirus Detectr PCR		Detected	8 am-5 pm Daily
Ethosuximide		> 150 ug/mL	8 am-5 pm Daily
Flecainide		> 1.0 ug/mL	8 am-5 pm Daily
Fluoxetine + Norfluoxetine		> 2000 ng/mL (F + NF)	8 am-5 pm Daily
Gentamycin		> 12 ug/ml	8 am-5 pm Daily
Glucose		< 40 mg/dl > 500 mg/dl	
Hemoglobin	0-1 mo: 1 mo-adult:	< 7 g/dl < 7 g/dl > 20 g/dl	
Hematocrit	0-1 mo: 1 mo-adult:	< 20% > 70% < 20% > 60%	
Heparin –PF4 Antibodies (HIT)		Positive	8 am-5 pm Daily
Herpes 1 and 2 DNA PCR		Detected	8 am-5 pm Daily
Herpes DNA Ultraquant PCR		>80 copies/mL	8 am-5 pm Daily
Herpes Antigen Detection DFA	0-12 yrs	Detected	8 am-5 pm Daily
Herpes Simplex culture	0-12 yrs	Isolated	8 am-5 pm Daily
Histoplasma Abs CSF		Positive	8 am-5 pm Daily
HSV I/II ,Rapid CSF Priority		> 80 copies/mL	8 am-5 pm Daily
Imipramine + Desipramine		> 500 ng/mL (I + D)	8 am-5 pm Daily
Iron	0-12 yr:	> 299 ug/dl	8 am-5 pm Daily
JCV, Rapid CSF Priority		> 80 copies/mL	8 am-5 pm Daily
Lamotrigine		> 20 ug/mL	8 am-5 pm Daily
Lead	0-18 yr	> 20 ug/dl	
Legionella DFA		Detected	8 am-5 pm Daily
Lidocaine		> 10 ug/ml	8 am-5 pm Daily
Lithium		> 1.5 mEq/L	
Nordiazepam		> 2000 ng/mL	8 am-5 pm Daily
Nortriptyline		> 500 ng/mL	8 am-5 pm Daily
Manganese Serum		> 10 ug/L	8 am-5 pm Daily
Manganese Whole Blood		> 30 ug/L	8 am-5 pm Daily
Manganese RBC		> 60 ug/L	8 am-5 pm Daily
Magnesium		< 1.0 mg/dl > 4.0 mg/dl	
Methotrexate		>=0.5 umol/L	8 am-5 pm Daily
Mercury Urine		> 35 ug/L	8 am-5 pm Daily
Mercury Whole Blood		>=40 ug/L	8 am-5 pm Daily
Microorganisms		Visible on manual diff	
Phenobarbital		> 60 ug/mol	
Phenytoin (Dilantin), Total		> 30 ug/ml	
Phenytoin (Dilantin), Free		> 3 ug/mL	8 am-5 pm Daily
Platelet Count		< 25 K/ul > 1000 K/ul	
Pneumocystis carinii DFA		Detected	8 am-5 pm Daily
Potassium	0-3 mo: 3 mo-2yr 2 yr-adult	< 3.1 mEq/L > 7.4 mEq/L < 3.1 mEq/L > 6.4 mEq/L < 3.1 mEq/L > 6.5 mEq/L	
Primidone		> 15 ug/mL	8 am-5 pm Daily

Parameter	Age Specific	Critical Value	Notes
Procainamide		> 16 ug/mL	8 am-5 pm Daily
(PT) INR		> 5.0	
PTT		> 100 sec	
Quinidine		> 10 ug/mL	8 am-5 pm Daily
Routine Culture (Any Type)		MRSA or VRE 1 st isolate	Not notified unless client is a Nursing Home
Salicylate		> 45 mg/dl	
SARS Detectr PCR		Detected	8 am-5 pm Daily
Sodium	0-1 yr: 1 yr-adult:	< 126 mEq/L > 149mEq/L < 125 mEq/L > 155mEq/L	
Theophylline		> 25 ug/ml	
Thyroxine (T4)	0 – 1 week	> 24.9 ug/dl	8 am-5 pm Daily
	1 wk – 1 mo.	> 19.9 ug/dl	8 am-5 pm Daily
	1 mo – 15 yrs	> 17.9 ug/dl	8 am-5 pm Daily
Tobramycin		> 12 ug/ml	8 am-5 pm Daily
Trazodone		> 5000 ng/mL	8 am-5 pm Daily
Valproic Acid		> 150 ug/ml	
Vancomycin		> 60 ug/ml	8 am-5 pm Daily
Virology		Positive on CSF or Blood	8 am-5 pm Daily
VZV, Rapid CSF Priority		>100 copies/mL	8 am-5 pm Daily
WBC	0-8 yr:	< 1.0 K/ul > 30.0 K/ul	8 am-5 pm Daily
	8 yr-adult	< 1.0 K/ul > 50.0 K/ul	8 am-5 pm Daily
West Nile Virus RNA PCR		Detected	8 am-5 pm Daily
Yeast in CSF		Any amount seen (cell count or India Ink prep)	8 am-5 pm Daily
Zonisamide		> 45 ug/mL	8 am-5 pm Daily

SPECIMEN CONTAINER CODES

ACD	Yellow top vacuum tube
AFBC	Acid-fast blood culture
AMPF	BD ProbeTec™ Amplified DNA Probe – Female
AMPM	BD ProbeTec™ Amplified DNA Probe – Male
B	Blue top vacuum tube. Must be filled to exhaust of vacuum. Mix gently after collection.
BCB	Aerobic blood culture – blue top
BCP	Anaerobic blood culture – purple top
BPS	CultureSwab Plus® for Bordetella pertussis
CT	Culture Swab® for routine cultures
FRM	10% neutral buffered formalin
GNL	Green top vacuum tube with lithium heparin anticoagulant. Mix gently after collection.
GNS	Green top vacuum tube with sodium heparin anticoagulant. Mix gently after collection.
GRY	Gray top (glucose) and other specialized testing.
HNC	24-hour urine container, with 2 gm Na_2CO_2 preservative
LAV	Lavender top vacuum tube with EDTA K3 anticoagulant. Mix gently after collection.
LQ	Liquid-based Thin Prep® Pap Smear collection vial.
NGYN	Urine cytology fixative. Buffered methanol.
NPS	Nasopharyngeal swab. Use only Dacron or rayon-tipped swab.
PPCS	ParaPak™ container for culture and susceptibilities. Follow instructions with kit.
PPOP	ParaPak® 10% buffered neutral formalin for O & P exam. Follow instructions with kit.
PR	Plain red top vacuum tube. Does not contain serum separator or gel-barrier.
RB	Royal blue top vacuum tube with EDTA K3 anticoagulant. Mix gently after collection.
RB w/o	Royal blue top vacuum tube without anticoagulant for trace element collection.
SC	Sterile container
SL	Slide
SPU	Sputum container
SST	Serum separator tube. Use VACUETTE® brand gel-barrier tubes only. Mix gently after collection.
ST	Stool container
U	Plastic urine cup, no preservative
U24	24-hour urine container, no preservative
UAW	24-hour urine container, acid-washed
UBA	24-hour urine container, with 8 gm boric acid
UHCL	24-hour urine container, with 75 ml 6N HCL preservative
UVT	Urine Vacutainer® tube with gray stopper. For urine cultures only; not suitable for Urinalysis.
VCM	Viral/Chlamydia transport media.
VTM	H1N1 Viral transport media.

Consolidated Laboratory Services offers both Medicare approved panels, and other profiles designated to assist physicians in determining the patient's clinical condition. Although panels and profiles provide an ordering convenience, physicians are urged to remember:

- When ordering test(s) for which Medicare or Medicaid reimbursement is sought, the physician should order only those test(s) that are medically necessary for the patient.
- If all the tests in the requested profile are not medically necessary for the patient, the physician should order individual tests or less inclusive profiles.

CPT Code	Test Name		Specimen Requirement
86038 86225 86235 x5 86255	ANA Comprehensive Panel ■ Antinuclear Antibody (ANA) Anti-Centromere Anti-DNA (Double Strand) AB to DNA by C lucidiae Anti-RNP Anti-Sjogren Antibodies (SS-A, SS-B) Anti-Sm (Smith) Antibodies Anti-SCL-70	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
	Anemia Panel		CLS does not offer this as a specified panel. Tests should be ordered individually per physician request.
86021 86038	Antineutrophil Cytoplasmic Antibodies (ANCA) Profile ■ ANCA Total Autoantibodies ANCA Pattern Antinuclear Antibodies (ANA) ANA Pattern ANCA IgG Autoantibodies ANCA IgM Autoantibodies ANCA IgA Autoantibodies	SST	3 ml serum. Allow specimen to clot and centrifuge★. If results for ANCA Total is 1:20 or greater, ANCA IgG, IgM, IgA performed at no additional charge. See PAN-ANCA Profile for additional testing options.
86038 86431 85652 84550	Arthritis Panel Antinuclear Antibody Rheumatoid Arthritis Factor, Quantitative Sedimentation Rate, Westegren (automated) Uric Acid, Serum	2 SST LAV	4 ml serum, refrigerated. Allow specimen to clot and centrifuge★. 2 ml whole blood. Mix gently. Hold no longer than 24 hours.
	Bacterial Vaginosis Panel ■		See Vaginitis Detectr Panel
80048	Basic Metabolic Panel BUN Calcium Chloride CO ₂ Creatinine Glucose Potassium Sodium Anion Gap (calc)	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. A 12-hour fasting specimen is preferred. Do not open tube.

PROFILES AND PANELS

CPT Code	Test Name		Specimen Requirement
80053	Comprehensive Metabolic Panel A:G Ratio (calc) CO ₂ Albumin Chloride Alkaline Phos Creatinine ALT/SGPT Globulin (calc) AST/SGOT Glucose Bilirubin, Total Potassium BUN Protein, Total BUN/Creatinine (calc) Sodium Calcium	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge★. A 12-hour fasting specimen is preferred. Do not open tube.
83891 83892 83900 83901 x 21 83909 83912 83914 x23	Cystic Fibrosis Mutation Analysis ■ Test detects 23 Cystic Fibrosis (CF) mutations recommended by the American College of Medical Genetics (ACMG) and the American College of Obstetricians and Gynecologists (ACOG). The assay will identify approximately 88% of CF mutations in the Caucasian population, 94% in the Ashkenazi Jewish population, 64% in the African-American population, 72% in the Hispanic-American population and 49% in the Asian-American population.	LAV <u>or</u> LQ	5 ml whole blood EDTA. Mix gently. Heparinized whole blood is not acceptable. For LQ specimens; collect cells in liquid based Thinprep® collection vial. Tests for clinically relevant mutations and five benign variants. Supplemental cystic fibrosis requisition needed for interpretation of results, (patient ethnicity and family history). <i>For patients with family history, order 5432FH.</i>
80051	Electrolytes Chloride CO ₂ Potassium Sodium	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. A 12-hour fasting specimen is preferred. Do not open tube.
86664 86665 x2	Epstein-Barr Virus Antibodies Profile EBV Antibody to Nuclear Antigen EBV Antibody to Viral Capsid Antigen, IgG EBV Antibody to Viral Capsid Antigen, IgM	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
80076	Hepatic Function Panel (Liver Profile) Albumin Alkaline Phosphatase, Total ALT (SGPT) AST (SGOT) Bilirubin, Direct and Total Protein, Total	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
80074	Hepatitis (Acute) Panel Hepatitis A Antibody, IgM Hepatitis B Core Antibody, IgM Hepatitis B Surface Antigen Hepatitis C Antibody	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Automatic confirmation testing performed on positive Hepatitis B Surface Antigen and weakly positive Hepatitis C Antibody results at an additional charge.
83540 84466	Iron Profile Iron, Total Transferrin TIBC UIBC % Saturation	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
80061	Lipid Profile Cholesterol HDL Cholesterol LDL (calc) Cholesterol, Total HDL/LDL Ratio (calc) Triglycerides	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge★. A 12-hour fasting specimen is preferred.
	Liver Function Panel		See Hepatic Function Panel

CPT Code	Test Name	Specimen Requirement
85613	Lupus Anticoagulant Screen ■ Lupus Anticoagulant	SST 2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
86147 x3	Anticardiolipin IgG ● Anticardiolipin IgM ● Anticardiolipin IgA ●	BLUE 3 ml citrated plasma. Fill tube to exhaust of vacuum. Do not open. Keep on ice. Hold no longer than 6 hours.
86148 x3	Antiphosphatidylserine IgG ● Antiphosphatidylserine IgM ● Antiphosphatidylserine IgA ●	● Test performed if Lupus Anticoagulant is positive.
86021 x3 86038	PAN-ANCA Panel ■ ANCA Total ANCA Pattern Myeloperoxidase Autoantibodies Proteinase-3 Autoantibodies Antinuclear Antibodies (ANA) ANA Pattern ANCA IgG Autoantibodies ANCA IgM Autoantibodies ANCA IgA Autoantibodies	SST 3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. If results for ANCA Total is 1:20 or greater, ANCA IgG, IgM IgA performed at no additional charge.
82105 82677 84702 86336 82397, 84999	Penta Screen ■ Alpha-Fetoprotein, Maternal Serum Estriol, Serum hCG, Quantitative Inhibin A ITA (hyperglycosylated hCG)	4 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Provide all required information indicated on supplemental referral form.
	Phospholipid Antibody Evaluation	See Lupus Anticoagulant Screen.
80055	Prenatal Profile ABO/Rh – including weak D Antibody Screen Complete Blood Count (CBC) RPR Rubella IgG Hepatitis B Surface Antigen	2 SST 5 ml serum, refrigerated. Allow specimen to clot and centrifuge★. 2 LAV Completely fill both LAV tubes. Mix gently. Do not hold longer than 36 hours. Receipt of only 1 LAV tube may result in cancellation of certain profile components.
82105 82677 84702 86336	Quad Screen (Maternal) ■ Alpha-Fetoprotein, Maternal Serum Estriol, Serum hCG, Quantitative Inhibin A	SST 3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Provide all required information indicated on supplemental referral form.
86003 x18	RAST® Profile (South Atlantic) ■ Cat Dander Dog Dander Bermuda Grass Meadow Grass Kentucky Blue Johnson Grass Bahia Grass Cockroach Dermatophagoides pteronyssinus Dermatophagoides farinae (dust mite) Penicillium notatum Aspergillus fumigatus Alternaria alternata Cladosporium herbarum Oak Elm Pecan (Hickory) Pigweed Short (Common) Ragweed	SST 4 ml serum, refrigerated. Allow specimen to clot and centrifuge★.

■ Referral Test

★ See Centrifuge Instructions, page 7

PROFILES AND PANELS

CPT Code	Test Name	Specimen Requirement
80069	Renal Function Panel Albumin Creatinine BUN Glucose Calcium Phosphate CO ₂ Potassium Chloride Sodium	SST 3 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
	Stone Profile The Stone Profile is composed of a series of tests performed on serum and urine including calcium, oxalate, uric acid, cystine, parathyroid hormone, and other components. A special diet is required during the 10-day profile period. Please contact our office at (904) 573-2906 for scheduling and more information.	
84436 84479	THYROID PANEL T4 T3 Uptake FTI (calculation)	SST 4 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
84436 84479 84443	THYROID PANEL + TSH T4 T3 Uptake Thyroid Stimulating Hormone FTI (calculation)	SST 4 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
86694 86695 86696 86777 86778 86762 86644 86645	TORCH Panel Toxoplasmosis IgG and IgM Rubella IgG Cytomegalovirus IgG and IgM Herpes 1 and 2 IgG and IgM	2SST 7 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
82105 82677 84702	Triple Screen (maternal 2.0 MOM) ■ Alpha-Fetoprotein, Maternal Serum Estriol, Serum hCG, Quantitative	SST 3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Provide all required information indicated on supplemental referral form.
82105 82677 84702	Triple Screen (maternal 2.5 MOM) ■ Alpha-Fetoprotein, Maternal Serum Estriol, Serum hCG, Quantitative	SST 3 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Provide all required information indicated on supplemental referral form.
87481 87511 87798	Vaginitis DNA Detectr Panel ■ Candida albicans Gardnerella Trichomonas	LQ Follow liquid-based pap collection instructions. Sufficient cellular sample must be obtained. Panel includes; Candida, Gardnerella, Trichomonas. Tests may also be ordered individually.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
86900 86901	ABO and Rh Type	LAV	1 LAV completely filled. Mix gently. Do not centrifuge.
86900	ABO Type	LAV	1 LAV completely filled. Mix gently. Do not centrifuge.
	ACE		See Angiotensin Converting Enzyme (ACE)
82003	Acetaminophen	PR	1 ml serum, refrigerated. Wait 4 hours after ingestion before drawing specimen. See Toxicology Section. Gel barrier tubes not acceptable.
82009	Acetone, Serum	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
83519	Acetylcholine Receptor Antibodies ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
82013	Acetylcholinesterase, Amniotic Fluid ■	SC	3 ml amniotic fluid. Collection in sterile transport tube. Indicate gestational age, collect date, clinical indication and AFP/MOM results if available. Contamination of fetal blood may cause false positive results. See "cholinesterase" for blood specimens.
	Acid-Fast Culture With Smear, Fluid or Tissue		See Culture, Acid-Fast With Smear, Fluid or Tissue.
	Acid-Fast Culture With Smear, Sputum		See Culture, Acid-Fast With Smear, Sputum.
	Acid-Fast Culture With Smear, Urine		See Culture, Acid-Fast With Smear, Urine.
87206	Acid-Fast Stain	SC	Includes AFB stain only. See Microbiology Section.
	Activated Protein C Resistance		See Factor V Leiden/APCR w/Reflex to DNA-based Test for Gene Mutation.
	ACTH		See Adrenocorticotrophic Hormone (ACTH)
86603	Adenovirus Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
	ADH		See Antidiuretic Hormone (ADH).
82024	Adrenocorticotrophic Hormone (ACTH) ■	LAV	Collect 1 LAV. Centrifuge & remove at least 2 ml of plasma. Place plasma in plastic transport tube and freeze immediately.
	Aerobic Culture		See Culture, Aerobic.
	AFB Culture, Blood		See Culture, Acid-Fast, Blood.
	ALA		See Aminolevulinic Acid (ALA),
84460	Alanine Aminotransferase (ALT)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
82040	Albumin, Quantitative, Serum	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
	Albumin, Quantitative, Urine		See Microalbumin.
82055	Alcohol, Serum (Ethanol)	GRY or PR	Completely fill tube, refrigerate. Do not open tube. Do not use alcohol to cleanse the skin; use nonalcoholic antiseptic such as Betadine®. Fingertick specimens are not acceptable. See Toxicology Section.
82055	Alcohol, Urine (Ethanol)	U	Random urine, refrigerated. Container must be completely filled.

■ Referral Test

★ See Centrifuge Instructions, page 7

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
82085	Aldolase ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Separate serum and freeze if holding longer than 24 hours. Hemolyzed specimens are NOT acceptable.
82088	Aldosterone, Serum ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Indicate if patient is supine or recumbent.
82088	Aldosterone, 24 Hour Urine ■	UBA	24-hour urine with boric acid preservative.
84080	Alkaline Phosphatase, Isoenzymes (Fractionated)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★ (Includes total alkaline phosphatase).
	Alkaline Phosphatase, Leukocyte		See Leukocyte Alkaline Phosphatase.
84075	Alkaline Phosphatase, Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
	Allergy Profile		See RAST® Profile (South Atlantic) in the Profiles and Panels Section.
	Allergy Testing		See RAST®, Single Allergen.
82103	Alpha 1 Antitrypsin ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge.★ A 12-hour fasting specimen is preferred.
82105	Alpha-Fetoprotein, Maternal Serum ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Provide all information indicated on supplemental referral form.
	Alpha-Fetoprotein, Triple Screen		See Profiles and Panels Section.
82105	Alpha-Fetoprotein, Tumor Marker	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
80154	Alprazolam ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube.
	ALT		See Alanine Aminotransferase (ALT).
82108	Aluminum ■	RB w/o	Contact laboratory at (904) 308-5603 for special trace element collection kit.
80150	Amikacin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Separate serum, and freeze if holding longer than 24 hours. Specify if peak or trough.
82128	Amino Acid Screen Qual, Urine ■	U	20 ml minimum fresh random urine refrigerated. Hold no longer than 4 hours. Provide patient's age and sex, a brief clinical history, tentative diagnosis, and therapy over the last 3 days (i.e., drugs, x-ray, infant formula, diet). Freeze if holding longer than 4 hours.
82135 80102	Aminolevulinic Acid, 24 Hour Urine ■	U24	24-hour urine collected without preservative. Keep refrigerated and protect from light during collection.
80299 x2	Amiodarone ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube.
80182 80152	Amitriptyline (Elavil®) ■	PR	2 ml serum, refrigerated. Allow specimen to clot and centrifuge★. Immediately remove serum and place in plastic vial. Label as serum. Do not use gel barrier tube. Both Amitriptyline and Nortriptyline reported.

CPT Code	Test Name		Specimen Requirement
82140	Ammonia	GNS	5 ml heparin whole blood. Centrifuge immediately and separate plasma. Transport to lab immediately on wet ice. Freeze if holding longer than 1 hour.
82205	Amobarbital (Amytal®) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge★.
86280	Amoeba Serology		See Entamoeba Histolytica Antibody
87177	Amoeba Exam (Fluid Tissue)	SC	Examination for amoeba (Acanthamoeba, Naegleria) in fluid/tissue specimens such as CSF or eye.
80299 x2	Amoxapine (Asendin®)■	PR	1 ml serum, refrigerated. Do not use gel barrier tube.
82150	Amylase, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82150	Amylase, Urine (Random)	U	2-hour urine, no preservative.
	Amytal®		See Amobarbital (Amytal®).
	ANA		See Antinuclear Antibody (ANA).
	ANA Comprehensive Profile		See Profiles and Panels Section
	Anaerobic Culture		See Culture, Anaerobic.
82157	Androstenedione■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. An early morning specimen is preferred.
82164	Angiotensin Converting Enzyme (ACE) ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specimens for patients on Captopril must be frozen immediately. Grossly hemolyzed specimens will be rejected.
86850	Antibody Screen, Prenatal	LAV	1 LAV completely filled. Mix gently. Do not centrifuge. On prenatal positive screens with clinically significant antibodies, patient's plasma will be frozen for 2 weeks to allow time for clinician to order Antibody Titer at an additional charge.
86886	Antibody Titer, Prenatal	LAV	1 LAV completely filled. Mix gently. Do not centrifuge. Prenatal plasma will be frozen for titer comparison during pregnancy. When ordering this test, please write "Antibody Titer" (AB TITER) on test requisition form.
86147 x3	Anticardiolipin Antibodies ■	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Includes IgG, IgM, and IgA.
86255	Anticentromere Antibody ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84588	Antidiuretic Hormone (ADH) ■	2LAV	4 ml plasma. Must be in the laboratory within 6 hours of collection.
86225	Anti-DNA, Double Strand ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86226	Anti-DNA, Single Strand ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Anti-Factor Xa Activity		See Low Molecular Weight Heparin.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
83520	Antiglomerular Basement Membrane ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83520	Anti-GM1 Antibody ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83520	Antihistone Antibodies ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86376	Anti-LKM Antibody ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Antimicrosomal Antibody (Thyroid)		See Antithyroid Peroxidase (Anti-TPO)
83520	Antimitochondrial Antibody (MITO) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86021 86038	Antineutrophilic Cytoplasmic Antibody ■ (ANCA)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86038	Antinuclear Antibody (ANA)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Titer performed on all positive screens at an additional charge.
86905	Antigen Type	LAV	1 LAV completely filled. Mix well. Do not centrifuge. Test for the presence of a red blood cell antigen. Desired antigen must be indicated on the order.
86256	Antiparietal Cell Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86022	Antiplatelet Antibody (screen) ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Maintain at room temperature.
	Antiphospholipid Antibody Evaluation		See Phospholipid Antibody Evaluation in Panels and Profiles Section.
86235	Antiscleroderma Antibody (Scl-70) ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Anti-Sjögren Antibodies (SS-A, SS-B) ■		See SS-A and SS-B.
86256	Antismooth Muscle Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86235	Anti-Sm (Smith) Antibodies ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83883	Antistreptolysin O (ASO) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
85300	Antithrombin III	B	Blue top tube filled to exhaust of vacuum. Do not open tube. Keep on ice and transport to the laboratory immediately.
86800	Antithyroglobulin Antibody	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86376	Antithyroid Peroxidase (Anti-TPO)		See Thyroid Peroxidase Antibodies.
82172	Apolipoprotein A1 ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fast is preferred.
82172	Apolipoprotein B ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fast is preferred.
82175	Arsenic, Blood ■	RB	5 ml Royal Blue EDTA whole blood, refrigerated. Urine assay is preferable to blood.

CPT Code	Test Name		Specimen Requirement
82175 82570	Arsenic, 24 Hr. Urine ■	UAW	24-hour urine in acid-washed container. Avoid contact with glass.
	Arthritis Profile		See Panels and Profiles Section.
	Ascorbic Acid		See Vitamin C (Ascorbic Acid).
	Asendin ®		See Amoxapine (Asendin).
	ASO		See Antistreptolysin O.
84450	Aspartate Aminotransferase (AST)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86606 x3	Aspergillus Antibody Panel	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
88104	Aspirations, Direct Smears, Cytology	SL	Fix immediately with spray fixative. Label slide(s) with patient's name. See Cytology/Surgical Pathology Section.
	AST		See Aspartate Aminotransferase (AST).
	Aventyl® ■		See Nortriptyline.
	B12		See Vitamin B12.
	Barr Bodies		See Buccal Smear.
	Basic Metabolic Panel		See Profiles and Panels Section.
82232	Beta 2 Microglobulin ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Beta Strep Culture		See Culture, Beta Strep.
81002	Bile, Urine	U	25 ml random urine.
82248	Bilirubin, Direct (Conjugated)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Protect from light.
82247	Bilirubin, Total (Conjugated & Unconjugated)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Protect from light.
86612	<i>Blastomyces</i> , Total Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Bleeding Time		Test no longer available. See Platelet Function Assay.
	Blood Culture		See Culture, Blood.
87207	Blood Parasites	LAV	3 ml whole blood. Invert gently 8-10 times. Do not centrifuge.
82270	Blood, Stool	ST	5 g stool, refrigerated.
84520	Blood Urea Nitrogen (BUN)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	BCR-ABL ■		See Chromosome Analysis
	BNP		See B-Type Natriuretic Peptide.
	Bone Marrow Pathology		Bone marrow. See Cytology/Surgical Pathology Section.
	Bordetella Pertussis		See Culture, Pertussis with FA Stain
82491	Bromide ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube.

■ Referral Test

★ See Centrifuge Instructions, page 7

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CPT Code	Test Name		Specimen Requirement
83880	B-Type Natriuretic Peptide	LAV	3 ml whole blood. Invert gently 8-10 times. Separate plasma & freeze if holding longer than 24 hours.
	BUN		See Blood Urea Nitrogen (BUN).
82205	Butabarbital	PR	5 ml serum, refrigerated. Do not use gel barrier tube. See Toxicology Section.
86161	C1 Esterase Inhibitor ■	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*. Send to lab within 4 hours or separate and freeze.
86160	C1Q Complement Component ■	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86160	C2 Complement ■	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86160	C3 Complement	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86160	C4 Complement	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86160	C5 Complement ■	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86160	C6 Complement ■	SST	1 ml serum, refrigerated. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*.
86300	CA 15-3 (CA 27.29) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86301	CA 19-9	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86304	CA 125	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82308	Calcitonin ■	SST	3 ml serum, frozen. Allow specimen to clot and centrifuge*. Send to lab immediately or pour off serum and freeze.
82330 82800	Calcium, Ionized	SST	Collect 1 completely filled tube. Allow specimen to clot and centrifuge*. Do not open tube. Stable for up to 24 hours at 4°C.
82310	Calcium, Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82340 81050	Calcium, 24 Hr Urine	U24	24-hour urine, no preservative.
82360	Calculi, Renal ■	U	15 ml urine. Maintain at room temperature.
86651	Calif-LaCrosse Encephalitis Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Must specify IgG or IgM.
87481	<i>Candida albicans</i> DNA Detector	LQ	Rinse/swish collection device into vial of preserving solution, following manufacturer's instructions.
87449	<i>Candida</i> Antigen Detection ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Cannabinoids Drug Screen		See Toxicology Section.
80156	Carbamazepine (Tegretol)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.

CPT Code	Test Name		Specimen Requirement
82374	Carbon Dioxide	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Do not open tube.
82378	Carcinoembryonic Antigen (CEA)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Cardiac Risk Profile		See Profiles and Panels Section, Lipid Panel.
82380 x 2	Carotene ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Protect from light. A 12-hour fasting specimen is preferred. Patient should consume no alcohol for 1 day.
82384	Catecholamines, Fractionated, Urine ■	U24	24-hour urine collected without preservative. Keep refrigerated. Includes Total Catecholamines.
82384	Catecholamines, Plasma ■	2 GNS	Centrifuge and separate plasma within 15 minutes of collection. Label specimen as plasma. Transport to lab immediately on ice.
87070	Catheter Tip Culture		I.V. and CVP catheter tips. Gram stain is not included. See Microbiology Section.
	CBC		See Complete Blood Count (CBC).
	CEA		See Carcinoembryonic Antigen (CEA).
85048 86359 86360	CD4/CD8 (includes ratio) ■	ACD and LAV	1 ACD (yellow) and 1 LAV (purple) tube. Do not refrigerate or freeze. Specimens must arrive in lab the same day as collected. <i>Do not send specimens Saturday or Sunday.</i> Primarily used for monitoring patients with HIV infection.
82784 83516 x 3 86255 x 2	Celiac Disease Evaluator ■	PR or SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*, within 1 hour of collection. A 12-hour fasting specimen is preferred.
89051	Cell Count with Differential, Fluid or CSF	LAV	1 ml fluid, minimum. Mix gently. Hold no longer than 1 hour. Specify specimen source.
	Cerebrospinal Fluid Culture		See Culture, Cerebrospinal Fluid.
	Cerebrospinal Fluid Cytology	SC	1 ml refrigerated. Must be submitted immediately <u>without</u> preservative.
82390	Ceruloplasmin ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
86162	CH ₅₀ (Total Complement) ■	SST	1 ml serum frozen. Allow specimen to clot at room temperature for at least 1 hour. Centrifuge*, separate, and freeze immediately. Avoid hemolysis.
	Chemistry 7 Panel		See Profiles and Panels Section, Basic Metabolic Panel.
86631 x 2 86632	Chlamydia Trachomatis Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Panreactive for trachoma, psittacosis, LGV and TWAR. Includes IgA, IgG, and IgM.
	Chlamydia Culture		See Culture, Chlamydia

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
87491	Chlamydia by Amplified DNA Probe	AMPF or AMPM or U or LQ	Endocervical or male urethral specimen. Only one swab is required for both GC and Chlamydia assays. Not for medico-legal indications. Swabs with wooden shafts are not acceptable. For urine, collect only 15-20 ml of first-voided urine. NOT midstream. Patient should not have urinated for at least 1 hour prior to collection. Store and transport at 2-8 degrees Celsius. Follow liquid based Pap collection instructions. Sufficient cellular sample must be obtained to permit Pap and Chlamydia testing.
80154	Chlordiazepoxide (Librium®) ■	PR	5 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Immediately remove serum and place in plastic vial. Label as serum. Do not use gel barrier tubes.
82435	Chloride, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82438	Chloride, Sweat ■		Patient must come into the laboratory. Contact Nemours Pulmonary department at 390-3600 for appointment.
82436	Chloride, 24 Hr Urine	U24	24-hour urine with no preservative preferred; random (spot) is acceptable.
83718	Cholesterol, HDL	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
83721	Cholesterol, LDL (Direct) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
82465	Cholesterol, Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
82480	Cholinesterase, RBC ■	2 LAV	10 ml whole blood. Mix gently.
82480	Cholinesterase, Serum ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Avoid hemolysis & icterus.
88235 88269 88280 88285 88291	Chromosome Analysis, Amniotic Fluid ■	SC	20-30 ml amniotic fluid. Place in sterile tightly capped container. Maintain specimen at room temperature. Provide diagnosis or reason for the study and gestational age.
88230 88262 88291	Chromosome Analysis, Blood ■	GNS	5 ml whole blood. Maintain specimen at room temperature. Provide diagnosis or reason for the study.
88237 88262	Chromosome Analysis, Bone Marrow ■	GNS	3 ml bone marrow. Maintain specimen at room temperature. Provide diagnosis or reason for the study.
88230 88262 88289	Chromosome Analysis, Malignancy ■	GNS	5 ml whole blood. Maintain specimen at room temperature. Provide diagnosis or reason for the study.
82507	Citrate, Serum ■	SST	1 ml serum, frozen. Allow specimen to clot and centrifuge*.
82507	Citrate, Urine ■	UBA	24-hour urine collected with boric acid. Keep refrigerated.

CPT Code	Test Name		Specimen Requirement
	CK, Total		See Creatine Phosphokinase (CK) Total.
	CK-MB		See Creatine Phosphokinase MB Fraction (CK-MB).
80154	Clonazepam (Klonopin) ■	PR	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Do not use gel barrier tube.
80154	Clorazepate (Tranxene®) ■	PR	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Do not use gel barrier tube.
87324	Clostridium difficile Toxin Assay	ST	Stool, rectal, or colon washings in sterile container, no preservative. Refrigerate. Freeze if holding longer than 24 hours. See Microbiology Section.
	Clot Lysis		See Clot Retraction.
85170 85175	Clot Retraction	PR	5 ml whole blood. Do not centrifuge. Do not use gel barrier tube. Specimen must be in the laboratory within 2 hours of collection.
	CMV Antibody, IgG		See Cytomegalovirus (CMV) Antibody, IgG.
	CMV Antibody, IgM		See Cytomegalovirus (CMV) Antibody, IgM.
	CMV Culture		See Culture, Cytomegalovirus (CMV).
	Coagulation Studies		See individual listings for Factor II Activity, Factor V Activity, Factor VII Activity, Factor VIII Activity, Factor IX Activity, Factor X Activity, Factor XI Activity, Factor XII Activity, Mixing Studies, Related Antigen (Factor VIII), Ristocetin Cofactor, von Willebrand Multimers, and von Willebrand Profile. For multiple coagulation tests, draw no more than 3 blue-top tubes.
	Cocaine Metabolites Drug Screen		See Toxicology Section.
80101	Cocaine Metabolite(s), Qualitative	U	10 ml random urine, refrigerated. This test is also included in Rehab Drug Screen, Comprehensive Drug Screen, and Drugs of Abuse Screen. See Toxicology Section..
86635	Coccidioides Antibody, Total ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86157 86156	Cold Agglutinins		If Mycoplasma pneumoniae is suspected, please order Mycoplasma pneumoniae IgG and IgM. If other disease states (Raynaud, AIHA, lymphoma, etc) are suspected, please contact Customer Call Center at 308-5600 for specific collection and processing requirements.
	Complement, C1Q Component		See C1Q Complement Component.
	Complement, C2		See C2 Complement.
	Complement, C3		See C3 Complement.
	Complement, C3 Proactivator		See C3 Proactivator Complement.
	Complement, C4		See C4 Complement.
	Complement, C5		See C5 Complement.
	Complement, C6		See C6 Complement.

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CPT Code	Test Name		Specimen Requirement
85025	Complete Blood Count (CBC)	LAV	3 ml whole blood. Invert gently 8-10 times. Includes automated differential. If screening criteria are exceeded, a manual scan and/or differential will be performed at an additional charge. Hold no longer than 36 hours.
85027	Complete Blood Count (CBC) Without Differential	LAV	3 ml whole blood. Invert gently 8-10 times. Includes platelet but DOES NOT INCLUDE automated differential. Hold no longer than 36 hours.
	Comprehensive Drug Screen		See Toxicology Section..
	Comprehensive Metabolic Panel		See Profiles and Panels Section..
86880	Coombs' Direct	LAV	2 ml whole blood. Do not centrifuge. Includes Eluate if indicated.
86885	Coombs', Indirect (Antibody Screen)	PR	2 ml whole blood. Do not centrifuge. Do not use gel barrier tube. Includes Antibody identification and Antibody titer if indicated.
82525	Copper, Blood or Plasma ■	RB	10 ml royal blue with EDTA whole blood. Mix gently.
82525	Copper, Serum ■	RB w/o	10 ml royal blue without preservative. Mix gently.
82525 81050	Copper, 24 Hr Urine ■	UAW	24-hour urine collected in plastic acid washed container.
	Coproporphyrin, Quantitative, Urine		See Porphyrins, Quantitative, Urine.
82533	Cortisol, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify time of day on test request form and specimen.
82530 81050	Cortisol Free, Urine	UBA	24-hour urine collected with boric acid preservative.
86658 x 6	Coxsackie A(2-16) Antibody ■	SST or SC	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. <u>OR</u> 1 ml cerebrospinal fluid.
86658 x 6	Coxsackie B (1-6) Antibody ■	SST or SC	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. <u>OR</u> 1 ml cerebrospinal fluid.
84681	C-Peptide ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
	CPK, Total		See Creatine Phosphokinase (CK) Total.
86140	C-Reactive Protein (Inflammation)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
86141	C-Reactive Protein Ultrasensitive (Cardiac Risk)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Report includes cardiac risk interpretation.
82550	Creatine Phosphokinase (CK) Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82550 82553	Creatine Phosphokinase MB Fraction (CK-MB)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. May also use 1 GNL (green).
82575	Creatinine Clearance	U24 and SST	24-hour urine collected without preservative. Keep refrigerated. 2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Patient's height and weight required.

CPT Code	Test Name		Specimen Requirement
82565	Creatinine, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
81050 82570	Creatinine, Urine	U24	24-hour urine collected without preservative. Keep refrigerated. This is a total creatinine – not a creatinine clearance.
	CRP		See C-Reactive Protein (CRP).
82595	Cryoglobulin, Qualitative	PR	Special collection and processing requirements. Please call the Customer Call Center @ 308-5600 for instructions.
86403	Cryptococcus Antigen	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. <u>OR</u> 1 ml cerebrospinal fluid. Titer performed on all positive screens at an additional charge.
87328	Cryptosporidium Exam	ST	5 g stool. Do not submit specimen in PVA preservative. See Microbiology Section.
	CSF Culture		See Culture, Cerebrospinal Fluid.
	CSF Cytology		See Cerebrospinal Fluid Cytology.
87116	Culture, Acid-Fast, Blood	AFBC	Blood or bone marrow in special bottle. AFB stain is not included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on positive tuberculosis cultures at an additional charge.
87206	Culture Acid-Fast With Smear, Fluid or Tissue	SC	Place specimen in sterile container. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on positive tuberculosis cultures at an additional charge.
87206	Culture Acid-Fast With Smear, Sputum	SPU	Expectorated sputum. Early morning deep cough specimen is preferred. Rinse mouth first. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on positive tuberculosis cultures at an additional charge.
87206	Culture Acid-Fast With Smear, Urine	U	25 ml random urine. Early morning specimen is preferred. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on positive tuberculosis cultures at an additional charge.
87081	Culture, Beta Strep	CT	Throat swab, cervical swab, or vaginal swab. Collect specimen with aerobic Culturette® swab. Gram stain not included. Susceptability not performed. For the isolation of group A or B streptococci only depending on site. See Microbiology Section.
87040	Culture, Blood	BCB; BCP	8-10 ml blood or bone marrow in aerobic and anaerobic bottles. Aseptic collection technique. Gram stain is not included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.

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CPT Code	Test Name		Specimen Requirement
87070 87205	Culture, Bronchial	SC	Bronchial washings, brushings, or lavage. Gram stain is included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87070 87205	Culture, Cerebrospinal Fluid	SC	CSF, ventricular fluid. Gram stain is included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87110	Culture, Chlamydia	VCM	Cervical, urethral, or conjunctival swab in Viral/Chlamydia Transport media. Refrigerate after collection and transport on wet ice. DO NOT use wooden-shafted swabs. Note: Culture required for medico-legal indications.
87252	Culture, Cytomegalovirus (CMV)	SC; VCM; LAV	Urine or other fluid Swabs or secretion collected in Viral/Chlamydia Transport Media 5 ml whole blood. Mix gently after collection. Do not centrifuge. Refrigerate all specimen types after collection and transport on wet ice.
87070	Culture, Environmental	CT	Environmental specimen. Gram stain is not included. See Microbiology Section.
87070 87205	Culture, Eye	CT	Any eye specimen. Gram stain is included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
	Culture, Feces		See Culture, Stool.
87070 87205 87075	Culture, Fluid (Aerobic/anaerobic)	SC; PR	Blood bag, aspirates, fluids, bile, abscess in sterile red top tubes. Gram stain is included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87070 87075	Culture, Fluids in Blood Culture Bottles	BCB; BCP	Fluids sent in blood culture bottles. Gram stain is not included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on positive cultures at an additional charge. Specimens held up to 5 days before reporting as negative.
87102 (except blood)	Culture, Fungus	SC; CT	Submit sputum, skin scrapings, nail cuttings, or hairs in sterile container. Submit swab specimens in Culturette®. Fungus stain is included at an additional charge. Order Fungus Stain or KOH if requested. See Microbiology Section. Identification and susceptibility testing will automatically be performed on positive culture at an additional charge. Specimens held up to 4 weeks before reporting as negative.
87103	Culture, Fungus, Blood	BCB	5-10 ml blood aerobic blood culture bottle. Fungal smear is not included. See Microbiology Section.
87070	Culture, Genital	CT	Cervical, vaginal, urethral, or penile specimen. See Microbiology Section. Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.

CPT Code	Test Name		Specimen Requirement
87081	Culture, Gonococcus (GC)	CT	Cervical, urethral, anal, eyes (neonates), throat, or penile specimens. Gram stain <u>not</u> included. Sensitivities not performed. See Microbiology Section. Note: Culture required for medico-legal indications. Transport to lab immediately.
87255	Culture, Herpes	VCM	Collect specimen using viral transport media for herpes. Must provide specimen source and transport on wet ice. See Microbiology Section.
87081	Culture, <i>Legionella</i> With FA Stain ■	SC	Submit fresh biopsy tissue, lower respiratory tract specimens, or pleural fluid in sterile container. Keep refrigerated.
87081 x2	Culture, Pertussis with FA Stain ■	BPS	Collect nasopharyngeal specimen with CultureSwab Plus® (charcoal transport media). Follow directions in collection kit. Prepare two 2-well slides included in the kit by rolling swab over each well.
87070 87205	Culture, Sputum	SPU	Sputum, tracheal aspirates, or Lukens trap. Gram stain is included. See Microbiology Section. Note: Rinse mouth prior to collection. All specimens screened for contamination. If > 10 epithelials/LPF specimen will be rejected. Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87081	Culture, <i>Staphylococcus aureus</i>	CT	Any specimen. For detection of <i>Staphylococcus aureus</i> , SSTSA/ORSA, and MSSA/OSSA. Susceptibilities not performed.
87045	Culture, Stool	PPCS	Stool, colon washings, rectal swab. Place specimen in ParaPak™ culture and sensitivity transport media. Gram stain is not included. Includes the following pathogens: <i>Salmonella</i> , <i>Shigella</i> , <i>Yersinia</i> , <i>Campylobacter</i> , <i>Vibrio</i> and <i>E coli 0157</i> . See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87081	Culture, Surveillance	CT	Any specimen, For special organism detection except SSTSA (ORSA) and VRE. See Microbiology Section.
87070	Culture, Throat	CT	Throat or nasopharyngeal specimen. Collect specimen with CultureSwab®. Gram stain is not included. See Microbiology Section. Identification will be performed on most positive cultures at an additional charge.
87070 87025 87075 87176	Culture, Tissue (Aerobic/Anaerobic)	SC	Tissue specimen. Gram stain is not included. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
87088	Culture, Urine	UVT	Suprapubic, cysto, clean catch or catheter urine. Submit specimen in urine Vacutainer® tube. See instructions with kit. Gram stain is not included. Includes colony count. Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge. Susceptibilities not performed on urethral flora. See Microbiology Section. Specimen is stable up to 48 hours in transport tube.

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★ See Centrifuge Instructions, page 7

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CPT Code	Test Name		Specimen Requirement
87081	Culture, Vancomycin Resistant Enterococci (VRE)	CT	Any specimen. For detection of VRE. Susceptibilities not performed.
87252	Culture, Viral ■	VCM	Collect specimen in viral transport media. See Microbiology Section. Must refrigerate immediately. Must provide specimen site. Wooden shafted calcium alginate, or cotton swabs unacceptable. <u>Use only Dacron or rayon swabs.</u>
87070 87205	Culture, Wound	CT	Swabs of drainage, decubiti, superficial wounds, ulcer for aerobic organisms. Gram stain is included. If culture for anaerobic organisms is also required, please write "anaerobic culture" on form and transport to lab immediately. See Microbiology Section. Note: Identification and susceptibility testing will automatically be performed on most positive cultures at an additional charge.
82600	Cyanide ■	2GRY	10 ml whole blood. Mix gently and refrigerate. Send in original tube.
82030	Cyclic AMP ■	U	Random urine maintained at pH less than 3. Send to lab immediately.
87015	Cyclospora	ST	5 gm fresh stool, refrigerated.
80158	Cyclosporin	LAV	5 ml EDTA whole blood. Mix gently.
	Cystic Fibrosis Mutation Analysis ■		See Cystic Fibrosis Mutation Analysis in the Profiles and Panels Section.
82131 82570	Cystine, Urine ■	U	15 ml random urine, refrigerated. Hold no longer than 4 hours.
	Cytology, Fluids		See Fluids Cytology.
	Cytology, Sputum		See Sputum Cytology.
	Cytology, Urine		See Urine Cytology.
86644	Cytomegalovirus (CMV) Antibody, IgG	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86645	Cytomegalovirus (CMV) Antibody, IgM	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Cytomegalovirus (CMV) Culture		See Culture, Cytomegalovirus (CMV).
	Dalmane®		See Flurazepam (Dalmane®)
	DAT		See Coombs, Direct
82626	Dehydroepiandrosterone (DHEA) ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify age and sex on test request form.
82627	Dehydroepiandrosterone Sulfate (DHEA-S)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify age and sex on test request form.
	Delta Hepatitis Antibody		See Hepatitis Delta Antibody.
82634	11-Deoxycortisol ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify if post-metyrapone. Early morning specimen is preferred.
	Depakene®		See Valproic Acid.

CPT Code	Test Name		Specimen Requirement
80160	Desipramin (Norpramin®) ■	PR	2 ml serum. Allow blood to clot and centrifuge*. Do not use gel barrier tube. Immediately remove serum and place in plastic vial. Label as "serum". See Toxicology Section.
	Desyrel® ■		See Trazodone (Desyrel®)
	DHEA-S		See Dehydroepiandrosterone Sulfate (DHEA-S).
	DHEA, Unconjugated ■		See Dehydroepiandrosterone (DHEA)
80154	Diazepam (Valium®) ■	PR	2 ml serum, refrigerated. Collect specimen immediately prior to dose. Do not use gel barrier tube. Also includes Nordiazepam.
80162	Digoxin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Dihydroxy, Vitamin D		See Vitamin D.
	Dilantin®		See Phenytoin.
80185	Diphenylhydantoin (Dilantin®)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Direct Antiglobulin Test		See Coombs, Direct.
	Direct Bilirubin		See Bilirubin, Direct.
	Direct Coombs'		See Coombs', Direct.
	Direct Smear Aspirations		See Aspirations, Direct Smears, Cytology.
80299	Disopyramide (Norpace®) ■	PR	3 ml serum, refrigerated. Do not use gel barrier tube.
	DNA Ploidy Analysis		See Leukemia/Lymphoma Evaluation
	Doriden®		See Glutethimide (Doriden®)
80166 80299	Doxepin (Sinequan®) ■	PR	2 ml serum. Do not use gel barrier tube. Also includes Nordoxepin.
	Drug Screen, Amphetamines		See Amphetamines Screen in the Toxicology Section.
	Drug Screen, Cannabinoids		See Cannabinoids Screen in the Toxicology Section.
	Drug Screen, Cocaine Metabolites		See Cocaine Metabolites in the Toxicology Section.
	Drug Screen, Comprehensive		See Comprehensive Drug Screen in the Toxicology Section.
	Drug Screen, Rehab		See Rehab Drug Screen in the Toxicology Section.
	Drug Screen, Serum		See Serum Drug Screen in the Toxicology Section.
	Drugs of Abuse Screen		See the Toxicology Section.
84620	d-Xylose, Blood ■		Contact Customer Call Center at 308-5600 for specimen instructions.
84620	d-Xylose, Urine ■		Contact Customer Call Center at 308-5600 for specimen instructions.
	EA (Early Antigen) ■		See Epstein-Barr Virus (EBV) Antibody to Early Antigen.
86652	Eastern Equine Encephalitis Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Must specify IgG or IgM.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
	EBNA		See Epstein-Barr Virus (EBV) Antibody to Nuclear Antigen.
	EBV Antibody to Early Antigen		See Epstein-Barr Virus (EBV) Antibody to Early Antigen.
	EBV Antibody to Nuclear Antigen		See Epstein-Barr Virus (EBV) Antibody to Nuclear Antigen.
	EBV Antibody to Viral Capsid, IgG		See Epstein-Barr Virus (EBV) Antibody to Viral Capsid, IgG.
	EBV Antibody to Viral Capsid, IgM		See Epstein-Barr Virus (EBV) Antibody to Viral Capsid, IgM.
	EBV-EA		See Epstein-Barr Virus (EBV) Antibody to Early Antigen.
	Ehrlichia Smear		See Blood Parasites.
	Elavil ■		See Amitriptyline (Elavil)
	Electrolyte Panel		See Profiles and Panels Section.
	Electrophoresis		See individual listings for Hemoglobin Electrophoresis; Immunoelectrophoresis, Serum; Immunoelectrophoresis, Urine; Protein Electrophoresis, Serum; Protein Electrophoresis, Urine
86753	Entamoeba Histolytica Antibodies, IgG ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Environmental Culture		See Culture, Environmental
85048	Eosinophil Count, Nasal Smear	SL	Roll swab on each of two slides. Air dry. Label slides with patient name.
	Epstein-Barr Virus (EBV) Antibodies Profile		See Profiles and Panels Section
86663	Epstein-Barr Virus (EBV) Antibody to Early Antigen, IgG ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Epstein-Barr Virus (EBV) Antibody to Nuclear Antigen.		See Epstein-Barr Virus (EBV) Antibodies Profile.
	Epstein-Barr Virus (EBV) Antibody to Viral Capsid,		See Epstein-Barr Virus (EBV) Antibodies Profile
87799	Epstein-Barr Virus (EBV), Ultraquant ■	ACD	5 ml whole blood. Maintain specimen at room temperature and send to lab immediately.
82668	Erythropoietin ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Equanil®		See Meprobamate
	Esterase Inhibitor, C1		See C1 Esterase Inhibitor
82670	Estradiol, Serum	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82677	Estriol, Unconjugated Serum ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Estrogen/Progesterone Receptor Group		Includes DNA histogram. 1 g breast tumor tissue. Trim tissue free of fat, normal and necrotic tissue. Freeze immediately at dry ice temperature or colder. See Surgical Pathology Section.

CPT Code	Test Name		Specimen Requirement
82672	Estrogens, Total, Serum ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82679	Estrone ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Ethanol, Serum		See Alcohol (Ethanol) Serum
	Ethanol, Urine		See Alcohol (Ethanol) Urine
82690	Ethchlorvynol (Placidyl®) ■	PR	5 ml serum, room temperature. Do not use gel barrier tube.
80168	Ethosuximide (Zarontin®) ■	PR	4 ml serum, refrigerated. Do not use gel barrier tube.
85360	Euglobulin Clot Lysis ■	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
	Eye Culture		See Culture, Eye.
85210	Factor II Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
	Factor II Genotype		See Prothrombin Gene Mutation
85220	Factor V Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
83891 83892 x 2 83896 x 5 83903 83912	Factor V Leiden/APCR w/Reflex ■ To DNA-based Test for Gene Mutation	LAV and B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. If screen is abnormal, specimen will be sent out for Factor V Mutation using LAV top tube.
85230	Factor VII Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
85240	Factor VIII Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
85244	Factor VIII Antigen ■	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
85250	Factor IX Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
85260	Factor X Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
	Factor Xa Activity		See Low Molecular Weight Heparin

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
85270	Factor XI Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
85280	Factor XII Activity	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
82705	Fat, Qualitative, Stool	ST	Approximately 5 g stool, refrigerated. See Microbiology Section.
82710	Fat, Quantitative, Stool ■	ST	24, 48, or 72 hour stool collection. Contact CLS Supply line, 308-5603 to obtain the container. Specify collection period on Test Request form.
86000 x9	Febrile Agglutinins Panel	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
87999	Fecal Phenolphthalein	ST	5 gm stool, refrigerated.
80299	Felbamate (Felbatol) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82728	Ferritin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82731	Fetal Fibronectin		Special collection device required. Collect specimen prior to ANY vaginal/cervical exam. Send to the lab immediately.
83021	Fetal Hemoglobin, Quantitative ■	LAV	1 ml EDTA whole blood. Hold no longer than 24 hours. Mix gently.
85384	Fibrinogen	B	1.0 ml plasma. Fill blue top tube to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
85362	Fibrin Degradation Products	B	1 ml plasma. Fill blue top tube to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
88173 88172	Fine Needle Aspiration (Interpretation)		Smears must be fixed immediately. Contact St. Vincent's Medical Center pathologist at 308-3813 for specific arrangements. See Cytology/Surgical Pathology Section.
	Fine Needle Aspiration		See Cytology/Surgical Pathology Section.
80197	FK-506 ■	LAV	Completely fill tube and store at room temperature. Must be received in lab within 24 hours of collection.
80299	Flecainide (Tambocor®) ■	PR	1 ml serum, refrigerated. Do not use gel barrier tube.
	Flow Cytometry		See specific test: CD4/CD8 Leukemia/Lymphoma Evaluation
	Fluid Culture		See Culture, Fluid.

CPT Code	Test Name		Specimen Requirement
88108	Fluids Cytology		Includes effusions, breast, synovial, and fluids other than urine or sputum. Unless specimen can be delivered immediately to the laboratory, refrigeration is recommended. Submit in equal volume of 50% ethyl alcohol only if a delay of longer than 24 hours is anticipated. See Cytology/Surgical Pathology Section.
	Fluids in Blood Culture Bottles		See Culture, Fluids in Blood Culture Bottles.
86781	Fluorescent Treponemal Antibody ■ Absorption (FTA-ABS)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Confirmation test for positive RPR (STS).
80299 x2	Fluoxetine (Prozac ®) ■	PR	2 ml serum. Do not use gel barrier tube. Allow blood to clot and centrifuge. Immediately remove serum and place in plastic vial. Label as "serum".
82742	Flurazepam (Dalmane ®) ■	PR	5 ml serum, refrigerated. Immediately remove serum and place in plastic vial. Label as serum. Do not use gel barrier tube.
	Folate, RBC		See RBC Folate.
	Folate, Serum		See RBC Folate.
	Folic Acid		See RBC Folate.
83001	Follicle Stimulating Hormone (FSH)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Free Erythrocyte Protoporphyrin		See Zinc Protoporphyrin.
	Free T ₃		See T ₃ Free.
	Free T ₄		See T ₄ Free. (Thyroxine).
88331	Frozen Section		Frozen Section diagnosis is available Mon-Fri. - 8AM-5PM and at other times by special request only. Please contact a St. Vincent's Medical Center pathologist at 308-3813 <u>before</u> sending a specimen. See Cytology/Surgical Pathology Section.
82985	Fructosamine ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Avoid hemolysis.
	FSH		See Follicle Stimulating Hormone (FSH).
	FSP		See Fibrin Split Products.
	FTA-ABS ■		See Fluorescent Treponemal Antibody Absorption (FTA-ABS).
	Fungus Culture		See Culture, Fungus.
	Fungus Culture, Blood		See Culture, Fungus, Blood.
87206	Fungus Stain	SC	Any specimen. ONLY Fungus smear is included. See Microbiology Section.
	G-6-PD ■		See Glucose-6-Phosphate Dehydrogenase (G-6-PD).
	Gabapentin ■		See Neurontin Level.
	GAD		See Glutamic Acid Decarboxylase.
82977	Gamma Glutamyl Transpeptidase (GGT)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.

■ Referral Test

★ See Centrifuge Instructions, page 7

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CPT Code	Test Name		Specimen Requirement
82941	Gastrin ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred. Send to lab immediately or separate and freeze.
	GC by DNA Probe (Gonococcus)		See Gonococcus by Amplified DNA Probe.
	GC Culture (Gonococcus)		See Culture, Gonococcus.
	Genital Culture		See Culture, Genital.
80170	Gentamicin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify if <u>peak</u> or <u>trough</u> .
	GGT		See Gamma Glutamyl Transpeptidase (GGT).
87511	Gardnerella Vaginalis DNA Detectr	LQ	Rinse/swish collection device into vial of preserving solution, following manufacturer's instructions .
87329	<i>Giardia</i> Specific Antigen	ST	5 g stool. Do not submit in PVA preservative. See Microbiology Section.
82947	Glucose	GRY	1 ml plasma, refrigerated.
82955	Glucose-6-Phosphate Dehydrogenase ■ (G6PD)	LAV	4 ml EDTA whole blood, refrigerated.
82945	Glucose, Qualitative, Urine	U	Random urine, refrigerated. Hold no longer than 3 hours.
82951 82952	Glucose Tolerance Test	GRY <u>or</u> SST	Specify length of tolerance and if patient is pregnant. Patient should fast for 12 hours prior to the test. Submit all specimens together labeled with time of collection. Preferable for patients to come to a CLS Patient Service Center. See General Information Section.
83519	Glutamic Acid Decarboxylase (GAD) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82980	Glutethimide (Doriden ®) ■	SST	5 ml serum, refrigerated. Allow specimen to clot and centrifuge*.See Toxicology Section.
	Glycohemoglobin		See Hemoglobin A ₁ C.
	Glycosylated Hemoglobin A ₁ C.		See Hemoglobin A ₁ C.
87591	Gonococcus (GC) by Amplified DNA Probe	AMPF <u>or</u> AMPM	Endocervical or male urethral specimen. Only one swab is required for both GC and Chlamydia probe assays. For conjunctival specimens, see Culture, Gonococcus or Microbiology Section. NOTE: Do not use for medico-legal indications. Swabs with wooden shafts are not acceptable.
		<u>or</u> U	For urine, collect only 15-20 ml of first-voided urine , NOT midstream. Patient should not have urinated for at least 1 hour prior to collection. Store and transport at 2-8 degrees Celsius.
		<u>or</u> LQ	Follow liquid based Pap collection instructions. Sufficient cellular sample must be obtained to permit Pap and GC testing.
	Gonococcus Culture (GC Culture)		See Culture, Gonococcus.
87205	Gram Stain	SC	Any specimen. Includes Gram stain only. See Microbiology Section.

CPT Code	Test Name		Specimen Requirement
88302	Gross and Microscopic, Level II	FRM	Tissue. See Cytology/Surgical Pathology Section.
88304	Gross and Microscopic, Level III	FRM	Tissue. See Cytology/Surgical Pathology Section.
88305	Gross and Microscopic, Level IV	FRM	Tissue. See Cytology/Surgical Pathology Section.
88307	Gross and Microscopic, Level V	FRM	Tissue. See Cytology/Surgical Pathology Section.
88300	Gross Pathology Exam	FRM	Tissue. See Cytology/Surgical Pathology Section.
83003	Growth Hormone (HGH) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Remove serum and place into a plastic transport tube. A 12-hour fasting specimen is preferred.
	H1N1		See Influenza Antigen Detection.
	Haldol ®		See Haloperidol (Haldol ®).
80173	Haloperidol (Haldol ®) ■	PR	4 ml serum, refrigerated. Do not use gel barrier tube , they are not acceptable. Send to lab same day as collected.
86677	H pylori IgG, Qual.	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as positive, negative, or equivocal. If quantitative value is desired, please order as shown below.
86677	H pylori IgG, Quant. ■	SST	Allow specimen to clot. Centrifuge and refrigerate. Results expressed as numeric value.
86677	H pylori IgM, Quant. ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as numeric value.
87338	H pylori Antigen, Stool ■	ST	1-2 gm fresh stool specimen, refrigerated. Transport to lab immediately. Do not use formalin, PVA or other preservative.
83010	Haptoglobin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
	HAVAB		See Hepatitis A Antibody, Total or IgM.
	HB _c Ab		See Hepatitis B Core Antibody, Total or IgM.
	HB _s Ab		See Hepatitis B Surface Antibody.
	HB _s Ag		See Hepatitis B Surface Antigen.
	HCV		See Hepatitis C Antibody.
	HDL Cholesterol		See Cholesterol, HDL.
82175 83655 83825	Heavy Metals, Blood ■	RB	5 ml EDTA whole blood, refrigerated. Collect in royal blue (EDTA) top tube. Avoid powdered gloves, worksite collection and seafood 1 week prior to collection.
82175 83655 83825	Heavy Metals, Urine ■	UAW	24-hour urine, collected in acid washed container and refrigerated. Avoid seafood 1 week prior to collection. Do not use HCL to wash container.
85541	Heinz Body Stain	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do not centrifuge.
85014	Hematocrit	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do not centrifuge.

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CPT Code	Test Name		Specimen Requirement
85018	Hemoglobin	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do not centrifuge.
83036	Hemoglobin A ₁ C	LAV	5 ml EDTA whole blood. Mix gently. Do not centrifuge.
83020	Hemoglobin Electrophoresis	LAV	2 ml whole blood. Mix gently. Do not centrifuge.
	Hemoglobin F		See Fetal Hemoglobin, Quantative.
83070	Hemosiderin, Urine ■	U	Random urine. Hold no longer than 6 hours.
	Hepatic Function Panel	U	See Profiles and Panels Section.
86709	Hepatitis A Antibody, IgM	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86708	Hepatitis A Antibody, Total ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86704	Hepatitis B Core Antibody, IgM	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86704	Hepatitis B Core Antibody, Total	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86707	Hepatitis Be Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
87350	Hepatitis Be Antigen ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86706	Hepatitis B Surface Antibody	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as quantitative value. Frequently used to determine immune status for school physicals, etc.
87340	Hepatitis B Surface Antigen	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Confirmation testing will be performed on all positive results at an additional charge.
86803	Hepatitis C Antibody	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
87521	Hepatitis C RNA, Quantitative ■	LAV	Send to lab immediately or separate and freeze plasma within 4 hours of collection. Test performed by bDNA. If plasma is separated, label tube as "plasma".
87902	Hepatitis C Genotype ■	ACD	2 ml plasma, refrigerated. Send to lab immediately or separate and freeze plasma within 4 hours of collection to ensure accuracy. If plasma is separated and frozen, label transport vial with patient's name and "plasma".
86692 x 2	Hepatitis Delta Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Includes Hep D Total and IgM.
	Hepatitis Panel		See Profiles and Panels Section, Acute Hepatitis Panel.
	Herpes Antigen		See Culture, Herpes.
	Herpes Culture		See Culture, Herpes

CPT Code	Test Name		Specimen Requirement
86694 86695 86696	Herpes Simplex IgG & IgM ■	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Test includes HSV ₁ and HSV ₂ and IgG and IgM Total. IgM positive samples confirmed by IFA at no additional charge.
87274	Herpes Simplex, Direct Smear	SL	2 prepared slides of cellular material obtained from the base of fresh lesion. Roll specimen onto slides if using a swab to collect.
	Herpes Zoster		See Varicella-Zoster Antibody, IgM.
86308	Heterophile Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	HGH		See Growth Hormone (HGH).
83497 82570	5-HIAA, Quantitative, Urine ■	UHCL	24-hour urine with HCl preservative. Refrigerate during collection. Food and medication restrictions.
83088	Histamine, Blood ■	GNS	10 ml whole blood. Send to lab immediately or freeze.
86698	<i>Histoplasma</i> Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	HIV-1 Antibody by Western Blot	SST	See HIV Screen.
87390	HIV-1 P24 Antigen, Qualitative ■	SST	See HIV Screen.
86703	HIV Antigen/Antibody New "4 th generation assay. Assay can be useful in detecting earlier, acute phase infection with HIV-1, and prior to the emergence of antibodies. Effectively reduces the 'window' period (time after initial infection, before the presence of detectable antibodies).	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Screen tests for both HIV-1, HIV-2 AB and HIV-1 p24 Antigen. Positive screen will be confirmed by Immunoblot for an additional charge. Patients showing positive screen and negative immunoblot will also have additional HIV p24 Antigen testing performed at an additional charge.
87901	HIV-1 Genotype Plus ■ Includes Reverse Transcriptase (RTI) and Protease Inhibitors (PI)	2 LAV or ACD	5 ml whole blood. Mix gently. Do not centrifuge. Transport to lab immediately or separate and freeze plasma within 4 hours of collection. Label tube as "plasma".
87903 87904 x6	HIV Phenoscript ■	2 LAV or ACD	Separate plasma if holding longer than 4 hours. Sample can <u>not</u> be thawed and refrozen. Label tube as "plasma".
87536	HIV-RNA Quant ■	2 LAV	4 ml EDTA plasma. Mix gently. Spin, separate plasma, and freeze. Label as plasma. Quantitates HIV-1 virus RNA down to 400 copies/mL and up to 750,000 copies.
86812	HLA B-27 ■	2 ACD	10 ml whole blood. Maintain specimen at room temperature. Do not refrigerate or freeze. Please provide race and diagnosis of patient.
83090	Homocysteine	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Patient should be fasting for 12 hrs prior to collection. Centrifuge within 1 hr of collection.
83150	Homovanillic Acid ■	U24	24-hour urine collected without preservative. Keep refrigerated.
	HPL ■		See Human Placental Lactogen (HPL).
84703	Human Chorionic Gonadotropin (hCG), Qualitative (serum)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.

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CPT Code	Test Name		Specimen Requirement
84702	Human Chorionic Gonadotropin (hCG), Quantitative (serum)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. For pregnancy, state weeks of gestation.
87178	Human Papilloma Virus (HPV) ■	AMPF or AMPM OR LQ	Endocervical or male urethral specimen. Only one swab is required for both GC and Chlamydia probe assays. Rinse/swish collection device into vial of preserving solution, following manufacturer's instructions.
83632	Human Placental Lactogen (HPL) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Separate serum and freeze if holding longer than 4 hours. State approximate stage (in weeks) of gestation. If serum is separated and frozen, label tube as "serum".
83491 82570	17-Hydroxycorticosteroids, Urine ■	UBA	24-hour urine collected with boric acid as preservative.
84143	17-Hydroxypregnenolone ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83498	17-Hydroxyprogesterone ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. An early morning specimen is preferred.
83500 83505	Hydroxyproline ■	UHCL	24-hour urine collected with HCl as preservative. Must specify "free" or "total" on test requisition form. Low collagen diet for 24 hours prior to collection.
	25-Hydroxy Vitamin D		See Vitamin D (25-Hydroxy).
	IgA		See Immunoglobulin A (IgA).
	IgE		See Immunoglobulin E (IgE).
	IgG		See Immunoglobulin G (IgG).
	IgM		See Immunoglobulin M (IgM).
80174 80160	Imipramine (Tofranil®), QT ■	PR	3 ml serum. Do not use gel barrier tube. Allow blood to clot and centrifuge*. Immediately remove serum and place in plastic vial. Label as "serum".
	Immune Complex Detection C1Q Binding ■		See C1Q Binding (Immune Complex Detection).
	Immune Complex Detection Raji Cell Assay ■		See Raji Cell Assay (Immune Complex Detection).
	Immunoelectrophoresis		See Immunofixation, Serum or Urine
86334	Immunofixation, Serum	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86335	Immunofixation, Urine	U24 or U	24-hour urine. Collect without preservative. Keep refrigerated. Hold no longer than 6 hours after completion. Random urine specimen is also acceptable.
88323 88346	Immunofluorescence, Direct	FRM	Tissue. See Cytology/Surgical Pathology Section.
82784	Immunoglobulin A (IgA)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82785	Immunoglobulin E (IgE)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*..

CPT Code	Test Name		Specimen Requirement
82784	Immunoglobulin G (IgG)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82784 82787 x4	Immunoglobulin G Subclasses ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Includes IgG1, IgG2, IgG3, IgG4, and total IgG. Provide patient birth date.
82784	Immunoglobulin M (IgM)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Immunophenotyping		See CD4/CD8.
	Indirect Coombs'		See Coombs', Indirect.
87275 87276	Influenza Antigen Detection (H1N1)	VTM	Nasopharyngeal aspirate, nasopharyngeal washing, or throat washings. Immediately after collection, place the swab into the viral transport media vial. Label the tube as nose or nasopharynx. Refrigerate. Wooden-shafted swabs, calcium alginate or culturette with fluid in base is NOT accepted. DO NOT hold longer than 48 hours.
86710 x6	Influenza Virus A & B Antibodies ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83525	Insulin	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
86337	Insulin Antibodies ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84305	Insulin Growth Factor 1 ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Ionized Calcium		See Calcium, Ionized.
	Ionized Magnesium		See Magnesium, Ionized.
	Iontophoresis		See Chloride, Sweat.
	Iron, TIBC, % Saturation		See Iron Profile in Profiles and Panels Section.
83540	Iron, Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86341 x 2	Islet Cell Antibody ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Isoenzymes, Alkaline Phosphatase		See Alkaline Phosphatase, Isoenzymes.
82570 83586	17-Ketosteroids ■	UBA	24-hour urine collected with boric acid as preservative.
	Kleihauer-Betke		See Fetal Hemoglobin.
	Klonopin ■		See Clonazepam (Klonopin).
87220	KOH Preparation	SC	Any specimen. KOH prep only is included. Order Fungus Culture if needed.
83615	Lactate Dehydrogenase (LDH), Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83625 83615	Lactate Dehydrogenase (LDH), Isoenzymes ■	SST	1 ml serum, room temperature. Allow specimen to clot and centrifuge. Avoid hemolysis, icterus, & lipemia.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
83605	Lactic Acid	GRY	10 ml whole blood. Centrifuge immediately. Remove plasma within 15 minutes. Refrigerate. Label as "plasma". Specimen must reach lab within 24 hours.
	LDH		See Lactate Dehydrogenase (LDH), Total.
	LDH Isoenzymes ■		See Lactate Dehydrogenase (LDH), Isoenzymes
	LDL Cholesterol		See Cholesterol, LDL.
83655	Lead, Blood	LAV	Invert gently 8-10 times. Refrigerate. Pediatric samples may be collected using LAV pediatric collection device. St. Vincent's is an OSHA approved laboratory.
83655	Lead, Urine ■	UAW	24-hour urine collected in acid-washed container and refrigerated. Avoid contact with glass.
86713 x3	<i>Legionella</i> Antibody ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
87449	<i>Legionella</i> Antigen, Urine	U	5-10 ml random urine in sterile container. Keep refrigerated.
	<i>Legionella</i> Culture		See Culture, <i>Legionella</i> with FA Stain.
83670	Leucine Aminopeptidase ■	PR	1 ml serum, refrigerated. Do not use gel barrier tube.
88180 88181	Leukemia/Lymphoma Evaluation (includes DNA ploidy analysis) ■	LAV; ACD; SC	Maintain tube at room temperature. Specimen must be in the laboratory by 3:30 pm . Body fluids (such as pleural). Refrigerate without additive. Do not freeze. Tissue or lymph nodes wrapped in saline moistened gauze. Place on wet ice and deliver STAT to lab. May also send in RPMI tissue culture media.
85540	Leukocyte Alkaline Phosphatase Stain	GNS and LAV	1 ml sodium heparin whole blood and 3 ml EDTA whole blood. Must be delivered to the laboratory within 1 hour of collection.
89055	Leukocyte or Pus Examination	ST	Stool, rectal or colon washing. See Microbiology Section.
	LH		See Luteinizing Hormone (LH).
	Librium® ■		See Chlordiazepoxide (Librium)
80176	Lidocaine	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83690	Lipase, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Lipid Panel		See Profiles and Panels Section.
82465 83700 84478	Lipoprotein Electrophoresis ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
80178	Lithium	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Liver Panel		See Profiles and Panels Section, Hepatic Function Panel.

CPT Code	Test Name		Specimen Requirement
85520	Low Molecular Weight Heparin	B	Blue top (sodium citrate) tube filled to the exhaust of the vacuum. Mix gently. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. A minimum of 1 ml plasma is needed for each assay.
	Ludiomil ® ■		See Maprotiline (Ludiomil ®).
	Lupus Anticoagulant Screen		See Profiles and Panels Section.
83002	Luteinizing Hormone (LH)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86618	Lyme Disease Antibody Screen	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Equivocal or positives will be confirmed by Western Blot at additional charge.
	Lymphocyte Enumeration, T Cell		See CD4/CD8.
85048 86355 86359 86360	Lymphocyte Enumeration, T & B Cells ■	ACD and LAV	1 ACD (yellow) and 1 LAV (purple) tube. Do not refrigerate. Specimens must arrive in lab the same day as collected. DO NOT SEND SPECIMENS ON SATURDAY OR SUNDAY. Includes B-Cells, total T-cells, CD4 and CD8.
85048 86355 86357 86359 86360	Lymphocyte Enumeration, T, B and NK Cells ■	ACD and LAV	1 ACD (yellow) and 1 LAV (purple) tube. Do not refrigerate. Specimens must arrive in lab the same day as collected. DO NOT SEND SPECIMENS ON SATURDAY OR SUNDAY. Includes B-Cells, NK-cells, total T-cells, CD4 and CD8.
86631 x4 86632 x4	Lymphogranuloma Venereum ■ (LGV-PSIT)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
85549	Lysozyme (Muramidase) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83735	Magnesium, Ionized	SST	1 ml serum, refrigerated. Do Not Open Tube. Do not combine other tests with this tube. Allow specimen to clot and centrifuge*.
83735	Magnesium, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83735	Magnesium, Urine	U24	24-hour urine collected without preservative. Keep refrigerated.
	Malaria Smear		See Blood Parasite.
82205	Maprotiline (Ludiomil ®) ■	PR	4 ml serum, refrigerated. MUST BE MAINTAINED AT STRICT ROOM TEMPERATURE.
	Marijuana (Cannabinoids), Qualitative		See Cannabinoids (Marijuana), Qualitative
	Measles Antibody, IgG		See Rubeola (Measles) Antibody, IgG.
	Measles Antibody, IgM		See Rubeola (Measles) Antibody, IgM.
	Mebaral ®		See Mephobarbital (Mebaral ®).
	Mellaril ® ■		See Thioridazine (Mellaril ®).
80299	Mephenytoin (Mesantoin ®) ■	PR	2 ml serum, refrigerated.
82205 x 2	Mephobarbital (Mebaral ®) ■	PR	3 ml serum, refrigerated. Includes Mephobarbital and Phenobarbital.

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CPT Code	Test Name		Specimen Requirement
83805	Meprobamate (Equanil ®) ■	PR	5 ml serum, refrigerated. Do not use gel barrier tube.
83825	Mercury, Blood ■	RB	4 ml EDTA whole blood (royal blue). Keep refrigerated. Do not freeze. Avoid seafood 1 week prior to collection.
83825	Mercury, Urine ■	UAW	24-hour urine, collected in acid-washed container and refrigerated. Avoid contact with glass. Avoid seafood 48 hours prior to collection.
	Mesantoin ® ■		See Mephenytoin (Mesantoin ®)
	Metabolic Screen, Urine		See Amino Acid Screen, Urine.
83825 82570	Metanephrines, Fractionated ■	U24	24-hour urine collected without preservative. Keep refrigerated.
84600	Methanol (Methyl alcohol) ■	GRY	10 ml whole blood. Do NOT use alcohol or alcohol-containing solutions as skin preparation.
80299	Methotrexate ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube. Wrap tube in foil to protect from light.
	Methyl Alcohol		See Methanol (Methyl Alcohol).
83921	Methyl Melonic Acid (MMA) ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Methylphenidate		See Ritalin.
82491	Mexiletine ■	PR	3 ml serum. Do not use gel barrier tube.
	MHA-TP (Microhemagglutination)		See TP-PA.
81050 82043	Microalbumin	U24	24-hour urine collected without preservative, refrigerated. Random urine is acceptable for screen.
81015	Microscopic, Urine	U	15 ml random urine, refrigerated.
85611 x2 85732 x2 85610 85730	Mixing Studies PT Mixing PTT Mixing	B	Blue top (sodium citrate) tube filled to exhaust of the vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately. Specify PT or PTT Mixing study.
	MMA		See Methyl Melonic Acid
86308	Monotest	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82489 83866	Mucopolysaccharide ■	U	30 ml urine, minimum, refrigerated. Send to lab immediately or freeze within 4 hours.
86735 x2	Mumps IgG & IgM Antibodies ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Tests for both IgG and IgM.
	Muramidase		See Lysozyme (Muramidase).
86738	<i>Mycoplasma pneumoniae</i> IgG ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86738	<i>Mycoplasma pneumoniae</i> , IgM ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83874	Myoglobin, Serum ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.

CPT Code	Test Name		Specimen Requirement
83874	Myoglobin, Urine Qualitative ■	U	15 ml random urine, refrigerated. Hold no longer than 6 hours.
	Mysoline®		See Primidone (Mysoline®)
	Naprosyn®		See Naproxen (Naprosyn®)
80162	Naproxen (Naprosyn®) ■	PR	5 ml serum, refrigerated. Do not use gel barrier tube.
	Navane® ■		See Thiothixene (Navane®)
	Nebcin®		See Tobramycin (Nebcin®)
	Needle Aspiration		See Fine Needle Aspiration (Interpretation).
	Nembutal® ■		See Pentobarbital (Nembutal®)
80299	Neurontin Level ■	PR	2 ml serum, refrigerated. Draw 1 hour prior to next dose. Do not use gel barrier tube.
	Norpace®		See Disopyramide (Norpace®)
	Norpramin® ■		See Desipramine (Norpramin®)
80182	Nortriptyline ■	PR	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Immediately remove serum and place in plastic vial. Do not use gel barrier tube. Label specimen as "serum". See Toxicology Section.
	NRNP ■		See U1 RNP/SNRNP IgG Autoantibodies
83915	5' Nucleotidase ■	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Room temperature specimens not accepted. Hold no longer than 24 hours.
82271	Occult Blood, Fluid	U	1 ml body fluid, minimum. Hold no longer than 24 hours.
82270	Occult Blood, Stool (1-3 Screenings)	ST	Approximately 5 g stool. Place in clean container or directly onto Hemocult® slide. Physician may order a special diet. See Microbiology Section.
	O & P, Stool		See Ova and Parasites (O & P), Stool.
83930	Osmolality, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
83935	Osmolality, Urine	U	1 ml random urine, refrigerated.
85555 85557	Osmotic Fragility ■		Contact CLS Customer Call Center at 308-5600 for instructions.
87177 88313	Ova & Parasites, Comprehensive	PPOP	Submit stool specimen in 10% buffered neutral formalin. Contact the Customer Call Center @ 308-5600 if further information is desired. See Microbiology Section.
87328 x 2	Ova & Parasites, Screen	PPOP	Submit stool specimen in 10% buffered neutral formalin. Screen for Giardia and Cryptosporidium parasites only. See Ova & Parasite, Comprehensive if additional testing is desired.
83945	Oxalate, Urine ■	UHCL	24-hour urine collected with HCL as preservative. Refrigerate during collection.
	P24 Antigen ■		See HIV-1 Antigen (p24 Antigen), Qualitative.

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CPT Code	Test Name		Specimen Requirement
88164	Pap Smear, Cervical/Vaginal (Conventional)	SL	Submit one slide. Do not allow specimen to dry. Use spray fixative. Slide must be labeled with patient's name. See Cytology/Surgical Pathology Section.
88142	Pap Smear, Cervical/Vaginal (ThinPrep®)	LQ	Rinse/swish collection device into vial of preserving solution, following manufacturer's instructions. See Cytology/Surgical Pathology Section.
87290 x3	Parainfluenza Antigen Detection ■	SC	Nasopharyngeal aspirate or washing collected in sterile container. Refrigerate.
84183 x3	Paraneoplastic Evaluation ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82310 83970	Parathyroid Hormone C-Terminal Includes Total Calcium ■	SST	2 ml serum. Allow specimen to clot. Centrifuge, separate, and freeze serum immediately. Label specimen as "serum".
83970 82310	Parathyroid Hormone, Intact (PTH) Includes Total Calcium	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Transfer serum to plastic transport vial. Label with patient's name and "serum". Freeze or deliver to laboratory immediately.
86256	Parietal Cell Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
85730	Partial Thromboplastin Time (PTT)	B	1 ml plasma. Fill tube to exhaust of vacuum. Do not open. Keep on ice. Hold no longer than 4 hours.
86747 x2	Parvovirus B19, IgG & IgM ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
82205	Pentobarbital (Nembutal®) ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Pertussis		See Bordetella Pertussis.
80184	Phenobarbital	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours.
87999	Phenolphthalein Examination, Stool	ST	Stool. See Microbiology Section.
80185	Phenytoin (Dilantin®)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours.
81050	Phosphorus, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84105	Phosphorus, Urine	U24	24-hour urine collected without preservative. Keep refrigerated.
83986	pH, Stool	ST	Approximately 5 g fresh stool, refrigerated. Hold no longer than 2 hours. See Microbiology Section.
87172	Pinworm Examination, Stool	SL	Collect specimen using Pin Worm Prep Kit or clear tape, not frosted. Tape to one side of clear glass microscope slide. Label slide with patient name. Early morning collection is essential.
	Placidyl®		See Ethchlorvynol (Placidyl®)
85576 x 6	Platelet Aggregation		Contact the main laboratory at 308-3880 for collection instructions.
	Platelet Antibody ■		See Antiplatelet Antibody.
85049	Platelet Count	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do not centrifuge.

CPT Code	Test Name		Specimen Requirement
85576	Platelet Function Assay	B	1 Blue, completely filled to exhaust of vacuum. Transport to laboratory immediately. Test must be performed within 4 hours of collection. Do not centrifuge.
87281	<i>Pneumocystis carinii</i> , Smear by DFA	SC; SL	Bronchoalveolar lavage or washings are preferred specimens. Bronch brushings or induced sputum may be submitted but diagnostic yield is less. Submit fresh if possible.
88312	<i>Pneumocystis carinii</i> , Tissue	FRM	Tissue specimen should be submitted in 10% neutral buffered formalin. See Cytology/Surgical Pathology Section.
84110	Porphobilinogen, Qualitative, Urine ■	U	20 ml random urine, refrigerated. Deliver to the laboratory immediately. Protect from light. Hold no longer than 3 hours.
84110	Porphobilinogen, Quantitative, Urine ■	U24	24-hour urine collected without preservative, refrigerated. Protect from light. Specify quantitative. Deliver to the laboratory within 6 hours of completion.
84120	Porphyrin Screen, Qualitative ■	U	20 ml random urine. Protect from light.
84120	Porphyrins, Quantitative, Urine ■	U24	24-hour urine collected without preservative. Keep refrigerated. Deliver to the laboratory immediately and protect from light. Includes uroporphyrin and coproporphyrins.
84126 x14	Porphyrins, Stool ■	ST	1 g stool in plastic container. Protect from light. Patient should be off all medication, if possible, for at least 1 week. Patient should refrain from red meat 3 days prior to collection. Send to lab immediately.
	Post Vasectomy Sperm Count		See Sperm Count (Post Vasectomy)
84132	Potassium, Plasma	GNS	Centrifuge specimen immediately after collection, and transfer plasma to plastic transport vial. Label with patient's name and "plasma".
84132	Potassium, Serum	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84134	Prealbumin	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Medicare does not consider this test as medically necessary in an outpatient setting. Signed ABN must accompany test order.
80188	Primidone (Mysoline®) ■	PR	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Do not use gel barrier tube.
80192 x2	Procainamide (Pronesty®) with Metabolites ■	PR	1 ml serum, refrigerated. Do not use gel barrier tube. Procainamide and N-acetyl procainamide (PA-NAPA) are reported.
84144	Progesterone	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. For female patients, please specify approximate stage of menstrual cycle or gestation period.
84206	Proinsulin, plasma ■	LAV	1 ml plasma. A 12 hour fast before collection is required. Invert gently 8-10 times. Refrigerate. Send to lab immediately or spin and freeze plasma within 4 hours. Label as "plasma".

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
84206	Proinsulin, serum ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12 hour fast before collection is required. Send to lab immediately or spin and freeze serum within 4 hours. Label as "serum".
84146	Prolactin	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Separate serum and freeze if holding longer than 24 hours. Label specimen as "serum". A 12-hour fasting specimen is preferred.
	Pronestyl®		See Procainamide (Pronestyl®).
84153	Prostatic Specific Antigen (PSA)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Separate and freeze serum if holding longer than 24 hours.
84154 84153	Prostatic Specific Antigen, Free & Total ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Separate and freeze serum if holding longer than 24 hours.
85303	Protein C Activity	B	Blue top tube filled to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
85302	Protein C Antigen ■	B	Blue top tube filled to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
	Protein C Resistance, Activated		<u>See Factor V Leiden/APCR w/Reflex to DNA-based Test for Gene Mutation.</u>
84165	Protein Electrophoresis, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84166	Protein Electrophoresis, Urine	U <u>or</u> U24	5 ml (minimum) first morning or 24 hour urine collected without preservative. Refrigerate during collection.
81050 84156	Protein, Quantitative, Urine	U24	24-hour urine collected without preservative. Refrigerate during collection. Deliver to lab within 6 hours of completion.
85305 85306	Protein S Activity	B	Blue top tube filled to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
85305	Protein S Antigen ■	B	Blue top tube filled to exhaust of vacuum. Do not open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
84155	Protein, Total	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
85610	Prothrombin Time (PT) with INR	B	1 ml plasma. Fill tube to exhaust of vacuum. . Do not open. Hold no longer than 24 hours. Refrigerate or keep on ice.
83891 83892 x2 83896 x5 83903 83908 83912	Prothrombin Gene Mutation ■ (Prothrombin Gene Rearrangement)	LAV <u>or</u> ACD	3 ml whole blood, room temperature. Mix gently. Do not refrigerate or freeze.
	Protoporphyrin, Free Erythrocyte		See Zinc Protoporphyrin.
	Prozac®■		See Fluoxetine (Prozac®).

CPT Code	Test Name		Specimen Requirement
	PSA		See Prostatic Specific Antigen (PSA).
	PT		See Prothrombin Time (PT) with INR.
	PTH, C-Terminal		See Parathyroid Hormone C-Terminal.
	PTH, Intact		See Parathyroid Hormone, Intact.
	PTH, N-Terminal		See Parathyroid Hormone, Intact.
	PTT		See Partial Thromboplastin Time
86638 x6	Q Fever Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. IgG, IgM and IgA antibodies to <i>Coxiella burnetti</i> .
	Quaalude®		See Methaqualone (Quaalude®)
	Quick Strep Screen		See <i>Streptococcus</i> Group A, Rapid Test.
80194	Quinidine ■	PR	1 ml serum, refrigerated. Do not use gel barrier tube, they are not accepted.
	RA		See Rheumatoid Arthritis (RA) Factor.
86332	Raji Cell Assay (Immune Complex Detection) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Separate and freeze within 1 hour of collection.
	RAST® Profile (South Atlantic Region) ■		See Profiles and Panels Section.
86003	RAST®, Single Allergen ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Indicate allergen desired.
82747 85014	RBC Folate	2 LAV	1 ml EDTA whole blood. Mix gently and refrigerate. AND 3.0 ml EDTA whole blood frozen. Do not spin down blood prior to freezing. Note: If only 1 LAV can be obtained, do not freeze, but deliver to lab within 4 hours.
82945	Reducing Substances, Stool	ST	Approximately 1g stool, refrigerated. See Microbiology Section.
81002	Reducing Substances, Urine	U	15 ml random urine.
	Rehab Drug Screen		See the Toxicology Section.
	Related Antigen, Factor VIII		See Factor VIII Related Antigen.
	Renal Calculi		See Calculi, Renal.
	Renal Function Panel		See Profiles and Panel Section.
84244	Renin Activity ■	LAV	2 ml EDTA plasma, frozen. Centrifuge, separate and freeze plasma within 4 hours. Label specimen as upright or reclining and "plasma".
86756	Respiratory Syncytial Virus (RSV) Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
87807	Respiratory Syncytial Virus (RSV) Direct Antigen	SC or NPS	Specimens must contain cellular material. Submit nasopharyngeal washings or Aspirate in a sterile cup. Keep refrigerated. Collect specimen using sterile rayon or Dacron nasopharyngeal swab. Place swab in dry sterile tube for transport to lab. Wooden shafts, calcium alginate tipped swabs, cotton tipped swabs, or viral transport media are NOT acceptable.

■ Referral Test

★ See Centrifuge Instructions, page 7

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CPT Code	Test Name		Specimen Requirement
85045	Reticulocyte Count	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do not centrifuge.
	Retinol ■		See Vitamin A (Retinol).
	Reverse T ₃		See T ₃ Reverse.
86431	Rheumatoid Arthritis (RA) Factor, Quantitative	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
	Rheumatoid Factor		See Rheumatoid Arthritis (RA) Factor.
86901	Rh Type – includes weak D	LAV	1 LAV completely filled. Mix gently. Do not centrifuge. “Weak D” previously referred to as “Du”.
85245	Ristocetin Cofactor	B	Blue top (sodium citrate) tube filled to exhaust of vacuum. Do NOT open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
82492	Ritalin ® (Methylphenidate) ■	PR	2 ml serum, refrigerated. Send to lab immediately or spin, separate & freeze within 4 hours.
87425	Rotavirus Antigen Detection	ST	Stool, rectal or colon washing, refrigerated. See Microbiology Section.
	Routine Urinalysis		See Urinalysis, Routine.
86592	RPR (STS)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Titers will be performed on all positive screens at an additional charge.
	RSV Antigen		See Respiratory Syncytial Virus (RSV) Direct Antigen.
	RSV Antibody ■		See Respiratory Syncytial Virus (RSV) Antibody.
86762	Rubella Antibody, IgM ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed in EIA units.
86762	Rubella Antibody, IgG (Immunity Determinations)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as semi-quantitative value.
	Rubella Titer		Test not available. Order as shown above.
86765	Rubeola (Measles) Antibody, IgG	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as positive, negative, or equivocal.
86765	Rubeola (Measles) Antibody, IgM ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as semi-quantitative value.
80196	Salicylate	PR	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. See Toxicology Section. Do not use gel barrier tube.
87220	Scabies Exam	SC	Gently scrape skin with edge of glass slide or scalpel and place scrapings into sterile container. Label container with patient's name and identify as “skin scrapings”. See Microbiology Section.
	Schilling's Test		Test no longer available.
	Scl-70		See Aniscleroderma Antibody (Scl-70).
82205	Secobarbital (Seconal) ■	SST	5 ml serum, refrigerated. Allow specimen to clot and centrifuge*.

CPT Code	Test Name		Specimen Requirement
	Seconal		See Secobarbital (Seconal).
85652	Sedimentation Rate, Westegren automated	LAV	2 ml whole blood. Mix gently. Hold no longer than 24 hours.
89320	Semen Analysis Includes count, motility, and morphology	SC	Complete semen specimen should be put in a sterile container and maintained at body temperature. Specimen must be taken directly to the main laboratory <u>within 1 hour of collection</u> . Testing performed 6:30AM – 1:00PM Monday through Friday. Physician order and supplemental Semen Analysis form must accompany specimen. Obtain Semen Analysis form by calling Consolidated Laboratory Services Call Center @ 308-5600 or download the form from www.conlabs.com in the "Downloadable documents" area on our website.
84260	Serotonin, Serum ■	PR	2 ml serum, refrigerated. Patient should <u>AVOID</u> avocados, bananas, eggplant, pineapples, plums, tomatoes or walnuts for 48 hours prior to collection. Do not use gel barrier tube. Send to lab immediately or separate & freeze serum within 4 hrs.
	Serum Drug Screen		See Toxicology Section.
	Serum Pregnancy Test		See Human Chorionic Gonadotropin (hCG), Qualitative or Quantitative.
84270	Sex Hormone Binding Globulin ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify age and sex.
	SGOT		See Aspartate Aminotransferase (AST).
	SGPT		See Alanine Amniotransferase (ALT).
85660	Sickle Cell Screen	LAV	2 ml whole blood. Mix gently. Hold no longer than 48 hours. Do not centrifuge.
	Sinequan ® ■		See Doxepin (Sinequan ®)
	Sm (Smith) IgG Autoantibodies		See Anti-Sm Antibodies.
84295	Sodium, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
81050 84300	Sodium, Urine	U24	24-hour urine collected without preservative is preferred but random (spot) is acceptable. Refrigerate.
	Somatomedin-C ■		See Insulin Growth Factor 1.
81002	Specific Gravity	U	Random urine, refrigerated. Hold no longer than 24 hours.
89321	Sperm Count Post Vasectomy Includes only sperm count. See Semen Analysis for other components	SC	Complete semen specimen should be put in a sterile container. Specimen must be in the laboratory <u>within 5 hours of collection</u> . Testing performed 6:30AM – 8:00 PM. Specify as post-vasectomy. See Specimen Collection and Handling information in the front of this manual.
	Sputum Culture		See Culture, Sputum.
88104 88108	Sputum Cytology		Collect in Saccomanno's fixative (green solution). Deep cough specimen is required. See Cytology/Surgical Pathology Section.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
86235	SS-A IgG Autoantibodies ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86235	SS-B IgG Autoantibodies ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86653	St Louis Encephalitis Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Staphylococcus Aureus Culture		Isolation of Staph aureus, ORSA (SSTSA) or OSSA (MSSA). See Microbiology Section.
82360	Stone Analysis	ST	Maintain specimen at room temperature.
	Stone Profile		See Profiles and Panels Section.
	Stool, Blood		See Blood, Stool.
	Stool, Culture		See Culture, Stool.
87430	<i>Streptococcus</i> Group A, Rapid Test	CT	Throat specimen. Collect with a Culturette® swab. If negative, a Beta Culture will be performed at an additional charge. See Microbiology Section.
	Streptozyme		See Antistreptolysin O.
86256	Striated Muscle Antibody ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Avoid hemolysis. Serological screening test for myasthenia gravis.
	STS (RPR)		See RPR (STS).
	Sucrose Hemolysis Test ■		See Sucrose Screen.
86941	Sucrose Screen	B	2 ml sodium citrate, refrigerated. Mix gently.
	Sugar Water Test		See Sucrose Screen.
	Surveillance Culture		See Culture, Surveillance.
	Sweat Chloride		See Chloride, Sweat.
	Sweat Test		See Chloride, Sweat.
84481	T ₃ , Free	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84482	T ₃ , Reverse ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84480	T ₃ , Total (Triiodothyronine)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84479	T ₃ , Uptake (Triiodothyronine)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84439	T ₄ , Free (Thyroxine)	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	TAA-90		See Melanoma Screen
	Tacrolimus		See FK-506
	Tambocor® ■		See Flecainide (Tambocor®).
	TBG ■		See Thyroid Binding Globulin (TBG).
	T & B Cell Subsets		See Lymphocyte Enumeration.
	T Cell Subsets		See CD4/CD8.

CPT Code	Test Name		Specimen Requirement
	Tegretol®		See Carbamazepine (Tegretol®)
83519 84403	Testosterone, Bioavailable ■	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify patient's age and sex. Includes Total Testosterone.
84402	Testosterone, Free ■	SST	1 ml serum. Allow specimen to clot and centrifuge*. Patients currently being monitored using "Testosterone, Bioavailable" values should continue to order that test.
84403	Testosterone, Total	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify patient's age and sex.
86774	Tetanus Antibody IgG ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	THC		See Cannabinoids Screen in Toxicology Section.
80198	Theophylline	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84430	Thiocyanate ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube.
84022	Thioridazine (Mellaril®) ■	SST	5 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
80299	Thiothixene (Navane®) ■	PR	4 ml serum, refrigerated. Protect from light. Do not use gel barrier tube.
	Throat Culture		See Culture, Throat.
85670	Thrombin Time	B	1 ml plasma. Fill blue top tube to exhaust of vacuum. Do not open. Hold no longer than 4 hours.
86800	Thyroglobulin Autoantibodies	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84432	Thyroglobulin	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Thyroid Antibodies		See Thyroglobulin Autoantibodies. See Antithyroid Peroxidase Antibody.
84442	Thyroxine Binding Globulin (TBG) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86376	Thyroid Peroxidase Antibody (TPO)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Thyroid Panel		See Profiles and Panels Section.
84443	Thyroid Stimulating Hormone (TSH), Ultrasensitive	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Also called TSH 3 rd generation.
	Thyroxine		See T ₄ Free (Thyroxine) or T ₄ Total (Thyroxine).
	TIBC % Saturation		See Iron, Transferrin, % Saturation.
	Tissue Culture		See Culture, Tissue.
	T Lymphocyte Profile ■		See CD4/CD8.
80200	Tobramycin (Nebcin®)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Specify if peak or trough. Separate and freeze if holding longer than 24 hours.
80299	Tocainide (Tonocard®) ■	PR	3 ml serum. Do not use gel barrier tube.

■ Referral Test

★ See Centrifuge Instructions, page 7

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
	Tofranil® ■		See Imipramine (Tofranil®).
	Tonocard® ■		See Tocainide (Tonocard®)
80201	Topiramate ■	PR	1 ml serum, refrigerated. Do not use gel barrier tube.
	Total Bilirubin		See Bilirubin, Total.
	Total Cholesterol		See Cholesterol, Total.
	Total Complement, CH ₅₀ ■		See CH ₅₀ (Total Complement).
	Total T ₃		See T ₃ , Total (Triiodothyronine).
	Total T ₄		See T ₄ , Total (Thyroxine).
86777	<i>Toxoplasma</i> Antibody IgG ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86778	<i>Toxoplasma</i> Antibody IgM ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
86781	TP-PA (Treponema Pallidum-Particle Agglutination) ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Confirmatory test for positive RPR (STS).
84466	Transferrin	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	Tranzene® ■		See Clorazepate (Tranxene®).
80299	Trazodone (Desyrel®) ■	PR	2 ml serum, refrigerated. Do not use gel barrier tube.
87798	Trichomonas Vaginalis DNA Detectr ■	LQ	Rinse/swish collection device into vial of preserving solution, following manufacturer's instructions.
84478	Triglycerides	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. A 12-hour fasting specimen is preferred.
	Triiodothyronine		See T ₃ , Total (Triiodothyronine) or T ₃ , Uptake (Triiodothyronine).
	Triple Screen ■		See Alpha-Fetoprotein, Triple Screen in Profiles and Panel Section.
84484	Troponin I	SST	Allow specimen to clot and centrifuge. May also use 1 GNS (green).
84488	Trypsin, Stool ■	ST	Approximately 5 g stool is required. Deliver to the laboratory immediately. Specimen must be processed by the laboratory within 4 hours of collection.
	TSH		See Thyroid Stimulating Hormone (TSH).
	Typhoid		See Febrile Agglutinins.
87207	Tzanck Prep (for herpes viral inclusion bodies)	SL	Scrape cells from base of vesicular lesion, roll onto slide, and fix immediately with spray fixative. Label slide with patient's name. See Cytology/Surgical Pathology Section.
86235	U1 RNP/SNRNP IgG Autoantibodies ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
	UCG		See Pregnancy Test, Urine.
	Urea Nitrogen, Blood		See Blood Urea Nitrogen (BUN).

CPT Code	Test Name		Specimen Requirement
81050 84540	Urea, Urine	U24	24-hour urine collected without preservative. Keep refrigerated.
84550	Uric Acid, Serum	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
81050 84560	Uric Acid, Urine	U24	24-hour urine collected without preservative. Keep refrigerated.
81001 81003	Urinalysis, Routine macro & microscopic macro only	U	15 ml random urine, minimum, refrigerated. Hold no longer than 3 hours. Specimens will be screened for macroscopic abnormalities. Positive findings will be examined microscopically at an additional charge.
	Urine Culture		See Culture, Urine
88108	Urine Cytology	NGYN	Unless urine specimen can be delivered to the laboratory immediately, add equal volume to buffered methanol. Note on requisition if specimen is obtained by catheter. See Cytology/Surgical Pathology Section.
	Urine Pregnancy Test		See Pregnancy Test, Urine.
	Uroporphyrins, Qualitative, Stool		See Porphyrins, Stool.
	Uroporphyrins, Qualitative, Urine		See Porphyrins, Quantitative, Urine.
	Vaginitis DNA Detectr Panel ■	LQ	See Profiles and Panels Section.
	Valium® ■		See Diazepam (Valium®)
80164	Valproic Acid (Depakene)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours.
	Vancocin®		See Vancomycin (Vancocin®)
80202	Vancomycin (Vancocin®)	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours. Specify peak or trough.
87081	Vancomycin Resistant Enterococci Culture (VRE)	CT	Isolation of Vancomycin Resistant Enterococci. See Microbiology Section.
84585 81050	Vanillylmandelic Acid (VMA), Urine ■	U24	24-hour urine collected without preservative. Keep refrigerated.
	Varicella Titer		See Varicella IgG, Quant.
86787	Varicella IgG, Quant (Titer)	SST	1 ml serum. Allow specimen to clot and centrifuge. Results expressed in EIA units. Frequently used to determine immune status for school physicals, etc.
86787	Varicella Zoster Antibody, IgG	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed as positive, negative, or equivocal.
86787	Varicella Zoster Antibody, IgM ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Results expressed in EIA units.
87290	Varicella Zoster, Direct Smear	SL	1 prepared slide of cellular material from the base of fresh lesion(s). Roll specimen onto slide if using a swab.

ALPHABETICAL TEST LIST

CPT Code	Test Name		Specimen Requirement
84586	Vasoactive Intestinal Peptide (VIP) ■	2 LAV	3 ml EDTA plasma, refrigerate. Mix tube gently after collection.
	VCA-IgG ■		See Epstein-Barr Virus (EBV) Anitbody to Viral Capsid Antigen, IgG.
	VCA-IgM ■		See Epstein-Barr Virus (EBV) Anitbody to Viral Capsid Antigen, IgM.
	VIP ■		See Vasoactive Intestinal Peptide (VIP).
	Viral Culture		See Culture, Viral.
	Viral Inclusions		See Tzanck Test (Viral Inclusions).
87250	Viral Serology ■	SST	5 ml serum, refrigerated. Allow specimen to clot and centrifuge*. List desired virus(es) and date of onset of symptoms. To rule out recent infection, an acute (collected at onset) and convalescent (collected 2-3 weeks later) should be tested in parallel. Notify lab if both specimens will be submitted at same time. See Microbiology Section for further information.
85810	Viscosity, Serum ■	SST	3 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
84590	Vitamin A (Retinol) ■	SST	2 ml serum, refrigerated. Foil wrap to protect from light. Allow specimen to clot and centrifuge*.
84425	Vitamin B ₁ (Thiamine) ■	SST	4 ml serum, refrigerated. Foil wrap to protect from light. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours.
84207	Vitamin B ₆ ■	LAV	4 ml EDTA plasma, refrigerated. Foil wrap to protect from light. Draw blood into light protected lavender top evacuated tube, following an overnight fast. Patient must be restricted from alcohol and vitamins for at least 24 hours before a sample collection. Specimen must be received by the lab within 5 hours of collection.
82607	Vitamin B ₁₂	SST	4 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Freeze if holding longer than 24 hours. (Does not need to be protected from light).
82180	Vitamin C (Ascorbic Acid) ■	GNS	3 ml heparinized plasma. Centrifuge immediately after collection, separate plasma, and freeze. Label as "plasma". Wrap in foil to protect from light.
82652	Vitamin D (1,25-Dihydroxy) ■	SST	3 ml serum minimum, refrigerated. Allow specimen to clot and centrifuge*. Volume requirement must be met to avoid QNS.
82307	Vitamin D (25-Dihydroxy) ■	SST	3 ml serum minimum, refrigerated. Allow specimen to clot and centrifuge*. Send to lab within 24 hours or freeze. Volume requirement must be met to avoid QNS.
82491	Vitamin E ■	SST	2 ml serum, refrigerated. Allow specimen to clot and centrifuge*. Protect from light.
	VMA, Urine ■		See Vanillylmandelic Acid (VMA), Urine.
	Von Willebrand Factor Activity		See Ristocetin Cofactor.
	Von Willebrand Factor Antigen ■		See Factor VIII Related Antigen.

CPT Code	Test Name		Specimen Requirement
85247	Von Willebrand Multimers ■	3B	3 blue top (sodium citrate) tubes filled to exhaust of vacuum. Do NOT open. Refrigerate or keep on ice. Deliver to the laboratory immediately.
	Von Willebrand Disease Evaluation ■		See Profiles and Panels Section.
	WBC		See White Blood Count (WBC).
	Westergren Sedimentation Rate		See Sedimentation Rate Westegren.
	Western Blot Assay ■		See HIV antibodies.
86654	Western Equine Encephalitis Antibody IgG ■	SST	1 ml serum, refrigerated. Allow specimen to clot and centrifuge*.
85048	White Blood Count (WBC)	LAV	1 ml whole blood. Mix gently. Hold no longer than 36 hours. Do NOT centrifuge.
	Wound Culture		See Culture, Wound.
84650	Xylose Serum or Urine ■	U	Contact CLS' Customer Call Center at 308-5600, option 2 for special instructions.
	Zarontin® ■		See Ethosuximide (Zarontin®).
84630	Zinc, Blood ■	RB	4 ml EDTA whole blood. Draw in special royal blue top tube.
84202	Zinc Protoporphyrin ■	RB	2 ml EDTA whole blood, refrigerated. Protect from light.

INTRODUCTION

Our toxicology service is designed to meet both emergency and routine testing needs. Drug screening is performed for medical purposes only. We are unable to provide drug-free workplace testing, pre-employment screening, or testing for any other legal purpose.

Toxicology testing is available on an emergency basis 24 hours, 7 days per week. Turnaround time for results from a STAT drug screen is targeted for 4 hours from the receipt of the specimen(s) in the laboratory. Routine results are generally available within 24 hours.

Test methodologies utilized include spot tests, immunoassays, spectrophotometry, thin-layer chromatography, and gas chromatography/mass spectrometry (GC/MS). State-of-the-art equipment and methods are used in performing testing.

Drug screening procedures for the panels listed below include qualitative analysis for the drugs and drug classes listed under each panel. Screens for individual drugs, classes of drugs, or quantitative levels of drugs are available upon request. For consultation, please contact our clinical toxicologist at (904) 308-3894.

POLICIES FOR TOXICOLOGY TESTING

To ensure our services meet the exacting needs of our clients, we would like to clarify our drug screening policies, procedures, and terminology.

Policies for Reduction of False Negative Results

As a measure to reduce the reporting of false negative results, urine toxicology specimens are screened for urinary creatinine and for pH. If the creatinine level is $< 20\text{mg/dl}$ (consistent with a specific gravity < 1.005), the comment: "Urine specimen is very dilute based on creatinine concentration. Suggest recollection" will be added.

Should a creatinine of $< 1\text{mg/dl}$ be determined, urine specific gravity will be checked and recorded. The comment "Specimen inconsistent with human urine" will be added indicating that a fluid other than urine was submitted to the laboratory.

Urine pH must fall within the range of 4.5 to 8.5. Specimens not meeting pH criteria will be rejected.

Any sample in which interfering substances produce indeterminate screening results will receive the comment: "Suggest repeat testing due to the presence of endogenous or exogenous substances." This laboratory does not perform testing to determine the type of interfering substance. Interfering substances may indicate specimen adulteration, or the presence of certain medicinal or nutritional supplements or materials, such as radiographic dyes.

Reporting of Results

Upon screening the sample for the presence of the drugs designated by the client, if no drugs are detected, no further testing will be done and the test will be reported as "None Detected." For drug classes that are detected, the appropriate drug classes will be reported as "Positive".

For the comprehensive drug screen, only those drugs that are determined to be present in the sample are reported. Drugs tested for but not found to be present in the sample will not be listed. This is the only test for which the presence of an individual drug, as opposed to detection of a drug class, will be determined, when possible. For a partial list of the drugs and drug classes detected by this testing, please refer to the Comprehensive Drug Screen in the panels below.

Confirmations and Verifications

By definition, a verification test is the repeat screening of a sample by the same or similar method to verify the presence of a drug. A confirmation, on the other hand, is the testing of a sample by a method that has high selectivity and specificity for the drug in question, and which is based upon a different scientific principle than the initial screening method. Additionally, the criteria for determining whether or not a drug has been confirmed differs slightly depending upon whether the confirmation is being performed for medical or legal purposes. Currently, the only scientifically accepted confirmation method is Gas Chromatography/Mass Spectrometry.

Submitting a sample for repeat screening for a drug or drugs determined to be positive at your facility is verification testing, not confirmation testing. As such, orders for this service must be submitted as **“verify for the presence of ____.”**

Consolidated Laboratory Services does not provide confirmation testing only services. Any sample submitted as “confirm for the presence of ____” will be delayed as we will have to notify you of the incorrect order and determine whether you are seeking verification testing, or truly require confirmation testing. Samples requiring confirmation testing only should be sent directly to an HHS-Certified laboratory by the ordering facility.

Qualitative medical confirmation testing, as an additional procedure performed following screening, may be requested by adding the statement “confirm all positives” to an order for one of the screening panels below. For each drug class determined to be positive, a confirmation test will be automatically ordered. There will be an additional charge for each confirmation test performed. Most medical confirmations may be performed in our laboratory. Some, such as cannabinoids confirmation, must be sent to an HHS facility for confirmation, requiring several days for the return of results.

Amphetamine Screening

For drug screens that include testing for amphetamine, there are numerous readily available substances that may cross-react with the instrumental testing assay. The initial presumptive screening result of “Positive” may indicate a true amphetamine, a sympathomimetic amine, or a cross-reacting substance. A verification test, “Urine Amphetamine Screen Identification,” will be automatically ordered. This is a manually performed thin-layer chromatography test for amphetamines and sympathomimetic amines. An additional charge is associated with this testing. The result of this testing, indicating the presence or absence of a true amphetamine, is the clinically valid amphetamine screen result.

Phencyclidine Screening

Phencyclidine, or PCP, is a strong hallucinogen that is prevalent in some parts of the United States, but is rarely encountered in this area. There are over the counter cough suppressants that, if taken in great quantity, may interfere with this assay generating a false positive result. Therefore, the screening of any sample that is determined to be positive for PCP will automatically result in the order of a qualitative PCP confirmation. An additional charge is associated with this testing. The result of this confirmation testing represents the clinically valid phencyclidine result.

TOXICOLOGY

CPT Code	Drug Screens		Specimen Requirement
80101	AMPHETAMINES SCREEN	U	25 ml random urine. Minimum acceptable volume is 10 ml.
80101	CANNABINOIDS SCREEN	U	25 ml random urine. Minimum acceptable volume is 10 ml.
80101	COCAINE METABOLITES	U	25 ml random urine. Minimum acceptable volume is 10 ml.
80101 x 6	DRUGS OF ABUSE SCREEN Amphetamines Barbiturates Benzodiazepines Cannabinoids Cocaine metabolites Opiates	U	25 ml of urine, refrigerated. Minimum acceptable volume is 10 ml.
This screen is designed primarily for use in drug testing when the use of street drugs is suspected.			
80101 x 8	DRUGS OF ABUSE SCREEN WITH METHADONE Amphetamines Barbiturates Benzodiazepines Cannabinoids Cocaine metabolites Methadone Opiates Propoxyphene	U	25 ml of urine, refrigerated. Minimum acceptable volume is 10 ml.
80101 x 7	DRUGS OF ABUSE SCREEN WITH PROPOXYPHENE Amphetamines Barbiturates Benzodiazepines Cannabinoids Cocaine metabolites Opiates Propoxyphene	U	25 ml of urine, refrigerated. Minimum acceptable volume is 10 ml.
82055	ETHANOL SCREEN, URINE QUALITATIVE	U	Completely filled urine container with tightly sealed lid.
80101	METHADONE SCREEN	U	25 ml random urine, refrigerated. Minimum acceptable volume is 10 ml.
80101	OPIATES SCREEN	U	25 ml random urine. Minimum acceptable volume is 10 ml.
80101	PHENCYCLIDINE (PCP) SCREEN	U	50 ml random urine. Minimum acceptable volume is 20 ml.

CPT Code	Drug Screens		Specimen Requirement
80100 80101 x 9	REHAB DRUG SCREEN Amphetamines Barbiturates Benzodiazepines Cannabinoids Cocaine metabolites Meperidine Meprobamate Methadone Opiates Phencyclidine Phenothiazine metabolites Propoxyphene Sympathomimetic amines Tramadol Trazodone Tricyclic antidepressants	U	50 ml urine. Minimum acceptable volume is 20 ml.
	The Rehab Drug Screen is useful in monitoring patients rehabilitating from abuse of street drugs. It indicates if the patient is refraining from the use of these drugs while maintaining prescribed therapeutic drugs. This screen is also useful in evaluating patients presenting signs or symptoms indicative of a general behavioral disorder and/or some form of psychosis.		
	SERUM DRUG SCREEN	PR	5 ml serum (no gel). Heparinized plasma (green top tube) is also acceptable.
82003 82055 80196 80101	Acetaminophen Ethanol Salicylates Tricyclic antidepressants (semi-quantitative)		
	The Serum Drug Screen is useful in situations where sedative-hypnotic drugs and/or alcohol is indicated in the drug intoxication of the patient. Acetaminophen, ethanol, and salicylates are reported as quantitative results. Tricyclics are reported as semi-quantitative results.		

80100 x 2	COMPREHENSIVE DRUG SCREEN	U	50 ml urine. Minimum acceptable volume is 20 ml.
80101 x 8			
82055		SC	10 ml gastric aspirate (not recommended)

The Comprehensive Drug Screen is generally indicated in situations where patients are comatose and no prior history is known. If serum testing is desired, a Serum Drug Screen should be ordered in addition to this test.

Gastric aspirate is only recommended in cases of recent ingestion when the patient is still asymptomatic.

Acetaminophen	Fenfluramine	Pentobarbital
Alcohol – Ethyl	Fenoprofen	Phencyclidine
Amitriptyline	Fluoxetine	Phenobarbital
Amobarbital	Flurazepam	Phenothiazines
Amoxapine	Gemfibrozil	Phentermine
Amphetamine	Guaifenesin	Phenylpropanolamine
Barbiturates	Hydrocodone	Phenyltoloxamine
Benzotropine	Hydromorphone	Phenytoin
Benzodiazepine metabolites	Hydroxyzine	Primidone
Benzoyllecgonine (cocaine metabolite)	Ibuprofen	Procaine
Brompheniramine	Imipramine	Procainamide
Bupropion	Ketamine	Promethazine
Butalbital	Ketones	Propoxyphene
Butabarbital	Ketoprofen	Propranolol
Cannabinoids (THC)	Labetalol	Protriptyline
Carbamazepine	Lidocaine	Pseudoephedrine
Carisoprodol	Loxapine	Pyrilamine
Chlordiazepoxide	Maprotiline	Quinidine
Chlorpheniramine	Meperidine	Quinine
Chlorpromazine	Meprobamate	Ranitidine
Chlorzoxazone	Methadone	Salicylates
Clozapine	Methamphetamine	Secobarbital
Citalopram	Methaqualone	Sertraline
Clorazepate	Methocarbamol	Strychnine
Clomipramine	Methylenedioxymeth-amphetamine (DMDA)	Sympathomimetic Amines
Citalopram	Metoclopramide	Terfenadine Metabolite
Cocaine	Morphine	Theophylline
Cocaethylene	Naproxen	Thioridazine
Codeine	Nordiazepam	Tramadol
Cyclobenzaprine	Normeperidine	Trazodone
Desipramine	Norpropoxyphene	Triamterene
Dextromethorphan	Nortriptyline	Tricyclic Antidepressants
Diazepam	Olanzapine	Trifluoperazine
Dihydrocodeine	Opiates	Trimethoprim
Diphenhydramine	Oxazepam	Tripelennamine
Doxepin	Oxycodone	Venlafaxine
Doxylamine	Paroxetine	Verapamil
Ephedrine	Pentazocine	Zolpidem

Drug Screen Consent Form

SAMPLE

I, the undersigned, do hereby give my consent to _____
 Its doctors, employees, or agent, together with any clinic, hospital or laboratory designated to perform urine
 and/or serum tests, or such other examinations as may be deemed necessary, on me for the detection of drugs
 and/or alcohol.

I further give my permission for _____
 Its doctors, employees or agents to release the results of these tests to the Employee Relations Department of
 the company by which I am employed or may be employed.

I am taking the following prescription drugs:

Name of Drug	Condition for Which Taken	Prescribing M.D.

I am taking the following non-prescription medications (such as aspirin, cold medications, etc):

Name of Drug	Condition for Which Taken

 Witness

 Signature

 Date

 Time

**This form should be retained in the patient's chart.
 Do not return completed form to Consolidated Laboratory Services.**

INTRODUCTION

Microbiology consists of several disciplines. These include Bacteriology, Mycobacteriology (AFB), Mycology, Parasitology, and Virology. Also included in this section are miscellaneous stool exam procedures that are usually ordered in conjunction with Parasitology exams.

In Microbiology, clinically useful test results depend on several factors: proper specimen selection, adequate collection, and timely transportation in the correct specimen collection device. Detailed instructions on specimen collection and transport are listed in this manual. The specimens must be placed in the appropriate collection devices so that transportation or delay does not destroy the specimen or harm the microorganisms. Please refer to the section on collection devices for the proper instructions. These instructions must be followed carefully to ensure the most accurate microbiological data.

The source of the specimen must be properly identified for the laboratory to correctly examine and identify potential pathogens. The laboratory request form contains space for the description of clinical specimens. Please be as detailed as possible in these descriptions. Please do not submit unlabeled specimens or containers with leaked specimen on the outside. These specimens are unacceptable.

Antimicrobial susceptibility studies will be automatically performed on potential pathogens from routine bacteriological cultures. Pathogens with known susceptibility patterns will not be tested unless the patient is allergic to the drug of choice or the pathogen is from a source that necessitates testing.

For the diagnosis of a viral infection, the specimens should be collected early in the acute phase of the infection. Seven days after the onset of illness, the recovery of virus from specimens is negligible. Specimens should be collected in the same manner as for bacteriologic culture. A special transport device is often required, so please refer to the instructions for guidance.

SPECIMEN COLLECTION, TRANSPORT DEVICES AND MEDIA

Swab Collection Devices

CultureSwab® (CT)

This swab system may be used for throat cultures, cultures of superficial wounds, and vaginal and cervical cultures. After the swab has been used to collect a specimen, insert fully into the tube.

CultureSwab Plus® (BPS)

This specialized swab is used for the collection of specimens for *Bordetella pertussis*. It can be easily distinguished from routine CultureSwab® by the presence of charcoal transport media at the base of the collection device. Follow the directions found in the collection kit for the preparation of slides.

BD ProbeTec™ Amplified DNA Assay Collection Kit Male or Female (AMPF or AMPM)

These containers must only be used when DNA testing for *Neisseria gonorrhoeae* and/or *Chlamydia* is desired. The liquid media will lyse any bacteria present rendering the specimen nonviable for culture. Only one swab need be submitted if both GC and *Chlamydia* DNA probe is requested. Follow the directions on the outside of the package for collection. Swab is not needed if testing performed in conjunction with liquid-based Pap testing.

Nasopharyngeal Swab (NPS)

This is a special swab for the collection of nasopharyngeal specimens. It has a thin flexible wire instead of a plastic sheath. Swab must be dacron or rayon. Do not use cotton or calcium alginate swab.

Viral/Chlamydia Transport Media

This is a transport media for all viruses including Herpes Simplex and Chlamydia. Tubes may be stored at room temperature until specimen is collected. After specimen collection, refrigerate and transport specimen on wet ice.

Blood Cultures (All blood cultures must be collected using sterile technique)**Routine Blood Culture Set: Aerobic and Anaerobic Bottles (BCB, BCP)**

The blue-top bottle is for aerobic organisms and the purple-top bottle is for anaerobic organisms. The blue bottle requires 8-10 ml of blood, and the purple bottle requires 8-10 ml of blood. If only enough blood is obtained for one bottle, use the aerobic blue bottle. For procedure on proper specimen collection, please refer to the Table of Contents, Blood Cultures, Collection Techniques and turn to that page for further instruction.

Pediatric Blood Culture Bottle

These bottles are designed to accommodate low-volume blood samples in the pediatric population. The yellow top requires 0.5 – 4.0 ml of blood. **Do not overfill.** If more than 4.0 ml is collected, inoculate the standard aerobic/anaerobic blood culture bottles.

Fungal Blood Cultures

Use blue top aerobic bottle. It requires 8-10 ml of blood. This bottle will be incubated for 4 weeks before it is finalized, if it is negative.

Acid-Fast (AFB) Blood Culture Bottle (AFBC)

This bottle is designed to support the growth of most mycobacteria that will grow in the blood. It requires 3-5 ml of blood. This bottle will be incubated for 42 days before it is finalized, if it is negative.

Stool Containers**ParaPak® for Ova and Parasites (PPOP)**

A single ParaPak® vial containing 10% buffered neutral formalin is used for transporting specimens for all ova and parasites. Use the scoop in the lid to place enough specimen in the vial so that the liquid reaches the line indicated on the vial. Cap and shake the vial to mix the specimen. Can be used for Ova and Parasites Screen or Comprehensive.

ParaPak® for Culture and Susceptibility (PPCS)

A single ParaPak® vial is used for transporting specimens for routine stool culture. Use the scoop in the lid to place enough specimen in the vial so that the liquid reaches the line indicated on the vial. Cap and shake the vial to mix the specimen.

Clean Vial or Plastic Carton (ST)

A white plastic carton is provided for stool specimens for occult blood, pus, fat, pH, phenolphthalein, reducing substances and *C. difficile* toxin.

Hemocult® Slides

These slides can be given to the patient to inoculate a stool specimen. They can only be used for the fecal occult blood test; gastric specimens cannot be tested with these cards.

Fluid Containers**Vacutainer® Urine C&S Transport Kit for Midstream Specimens (UVT)**

This is used to preserve a urine specimen if there is to be a delay in transport. This specimen may not be used for a routine urinalysis. You must submit a separate specimen for urinalysis if this transport device is utilized.

2.5 Ounce Sterile Container (SC)

This container can be used for a wide variety of specimens. This includes catheter urines, fluids, and tissue specimens. If tissue is submitted, do not put formalin in this container. If the tissue specimen is small (less than 3 cm in diameter) pour 1 ml sterile saline into the container to keep the tissue from dehydrating.

Spinal Fluid Collection Devices

If a lumbar puncture kit is used, the sterile screw cap tubes in the kit should be used to collect the specimen for culture. Do not refrigerate the specimen. The second or third tube collected should be used for cultures.

Sterile Screw Cap Tube

This tube may be used in place of the tubes that come with the lumbar puncture kit. It may also be used with other fluid specimens if anaerobes are not suspected.

Media Available for the Direct Inoculation of Specimens

Chocolate Agar

This media is available for direct inoculation of CSF specimens or specimens from eyes.

Blood Agar

This media is available for direct inoculation of CSF specimens, specimens from eyes, or urine specimens.

Sabouraud Dextrose Agar

This media is available for direct inoculation of specimens from eyes.

Thioglycolate Broth

This media is available for direct inoculation of specimens from eyes or from CSF.

MacConkey Agar

This media is available for direct inoculation of urine specimens.

Microscopic Slides

Stained Smears

Roll the specimen thinly onto the slide and allow the slide to air dry. This technique can be used with material for Gram, acid-fast, and fungal stains. Do not fix with Cytospray. The slide should be labeled with the patient's name.

Pinworm Prep

Use Pin Worm Prep Kit or the Scotch® Tape method for collection. If using Scotch® Tape, only clear cellophane tape is acceptable. Place the tape on one side of a clear microscopic slide for transport and examination. The slide must be labeled with the patient's name.

Viral Serology

Serologic diagnosis of a current or recent viral infection requires testing of two different serum samples. The acute phase serum should be collected within the first week of illness. The convalescent serum should be collected at least 3 weeks after the date of onset. Positive serologic evidence of infection is a fourfold increase in antibody titer between the acute and convalescent specimens. The laboratory should be notified if acute and convalescent serum samples will be submitted.

SPECIMEN COLLECTION FOR MICROBIOLOGICAL CULTURE

Specimen	Patient Preparation	Volume or Type	Container	Technique	Comments
Anaerobic Cultures					
Body fluids, secretions, pus	Decontaminate skin	1 ml or more if possible	CultureSwab®, sterile red top tube or syringe capped without needle	Aspirate without air. Swabs are discouraged for optimal recovery	Do not refrigerate. Transport immediately to lab
Respiratory	Transtracheal aspirate, pleural or emphysema fluid only	1 ml if possible	CultureSwab®, sterile red top tube or syringe capped without needle	Collected by physician	
Tissue	Surgery	1 cm ³ if possible	Sterile container	Collected by physician	Refrigerate specimen. Add 1 ml sterile saline if transport is delayed
Blood Cultures					
	Skin decontamination; prep kit	Adults and older children: 10ml/bottle; Infant: 1-4ml; 2-3 samples per 24 hours	Culture bottle for direct inoculation	Sterile venipuncture; specimens should not be drawn through catheter or cannulas	Volume of blood per bottle is the most important factor in recovering pathogens
Body Fluids (other than blood, urine, CSF)					
Joint fluid, pericardial fluid, peritoneal fluid, pleural fluid	Skin decontamination with alcohol	Several ml	Sterile tube or container	Sterile aspiration with syringe	
Cerebrospinal fluid	Skin decontamination with Betadine®	Several ml	Sterile, screw cap tubes, numbered in order of collection	Sterile lumbar puncture; ventricular suboccipital tap	Do not refrigerate. Transport immediately
Ear					
	Wash external canal with mild soap and water	Swabs (if volume allows, submit fluid)	CultureSwab® Place fluid in sterile tube.	Collect specimen through sterile funnel from eardrum or beyond	
	Wash external canal with mild soap and water	Swab, scraping, or fluid aspiration	Sterile tube or CultureSwab®	Obtain specimen from active margin preferable including fresh secretion from deeper areas	Surface swabbing might miss streptococcal cellulites or erysipelas
Eye					
Internal			Sterile syringe	Surgical technique; label carefully whether left or right eye	Speed in transport and care in handling is very important
External	None	Swab or scraping	CultureSwab®		Handle carefully. Transport to lab immediately
Genital Lesion					
	None	Vesicle fluid and cells	Viral/Chlamydia transport media	The vesicle is ruptured and the surface scraped to obtain vesicle fluid and cells from the base of the lesion Vesicle fluid may be aspirated from several fresh lesions	Transport using cold packs or wet ice. Do not freeze.
Genital Tract – Female					
	Skin decontamination with Betadine®	Uncontaminated fluid	Sterile red top tube	Aspirate with syringe	Do not refrigerate
	Wipe Cervix clean of secretion and mucus. Use speculum and no lubricant	Uncontaminated endocervical secretions; take two swabs	CultureSwab®		Do not refrigerate. Transport to lab immediately

MICROBIOLOGY

Specimen	Patient Preparation	Volume or Type	Container	Technique	Comments
Culdocentesis	Surgical procedure	Fluids, secretions	CultureSwab®	If swabs are to be used, insertion through a sterile tube sheath will help avoid contamination with vaginal flora	Likelihood of external contamination is high if cultures obtained through the vagina.
Intrauterine device	None	Entire device plus secretions, pus	Sterile Container		Unusual organisms may be isolated (e.g., Actinomyces and yeasts)
Urethra	Wipe clean with Betadine®	Swab with urethral secretion or free discharge	CultureSwab®	Collect 1 hour or more after urinating. If discharge cannot be obtained by "milking" the urethra, use swabs to collect material from about 2 cm inside urethra	
Vagina	Use speculum without lubricant	Aspirate or swab	CultureSwab®	Simple aspiration swabbing; swab mucosa high in vaginal canal	
Vulva (including labia, Bartholin glands)	Decontaminate with Betadine®	Swab or aspirate	CultureSwab® See culture for aspirate	Collect with swab or aspirate abscess with syringe and needle	
Genital Tract – Male					
	Skin decontamination with Betadine®	Swabs	CultureSwab®		Do not refrigerate
	None	Secretion for smear and culture	Sterile container	Digital massage through rectum	
Urethra	Wipe clean with Betadine®		CultureSwab®		
Intestinal					
Duodenal O & P	Patient must be intubated	Several ml	Sterile container		
Stool O & P	None		ParaPak® (pink top)	Follow instructions with ParaPak™ kit.	Screen or Comprehensive
Stool Culture	None		ParaPak® (orange cap)	Follow instructions with ParaPak™ kit.	
Stool Culture	None		CultureSwab®	Insert swab just beyond sphincter	Not useful for detection of carriers
Nasal Wash					
	None	Nasal washing	Sterile container	Tilt the patient's head back at an angle of approximately 70°. Insert a rubber bulb syringe (1 oz tapered containing 3-7 ml of PBS) until it occludes the nostril. Collect the specimen with one complete squeeze and release the bulb. Deposit aspirate in sterile screw cap bottle	Transport using cold packs or wet ice. Do not freeze
Respiratory Tract					
Throat/pharynx	None	Swab	CultureSwab®	Swab areas of exudation and tonsillar crypts	
Nasopharynx	None		Nasopharyngeal swab	Swab is passed through nose gently and into nasopharynx. Stay near septum and floor of nostril. Rotate and remove	Use Dacron or rayon tipped swab. Calcium alginate or cotton not suitable for viral collections.
Oral cavity: Mucosal surface or gums and teeth	Rinse mouth prior to collection	Scraping, swab	CultureSwab®	Swab lesion rather than skin surface. Aspirate pus, if present	

Specimen	Patient Preparation	Volume or Type	Container	Technique	Comments
Expectorated sputum			Sputum container or sterile container	Rinse mouth prior to collection. Patient must cough deeply. Obtain sputum, not saliva	Early morning sputum is best. If >10 epithelia's specimen will be rejected.
Skin					
Scabies		Skin scrapings	Sterile container	Gently scrape skin with edge of glass slide or scalpel and place scrapings into sterile container.	
Superficial wound	Clean wound surface	Pus, tissue	CultureSwab®	Swab lesion rather than skin surface. Aspirate pus, if present	
Decubitus ulcer	Clean wound surface		CultureSwab®	Swab deepest area of wound	
Closed abscess	Clean surface with Betadine®	Pus, 1 ml if possible	CultureSwab®		
Fistula, sinus tract	Clean surface with saline	Pus, 1 ml if possible	CultureSwab®	Swab or aspirate deeply	
Umbilicus	No cleaning	Swab	CultureSwab®	Swab	
Vesicle	None	Vesicle fluid and cells	Viral/Chlamydia Transport media (VCM). CultureSwab® for routine culture.	The vesicle is ruptured and the surface scraped to obtain vesicle fluid and cells from the base of the lesion. Vesicle fluid may be aspirated from several fresh lesions.	Transport using cold packs or wet ice. Do not freeze
Tissue					
Surgical or biopsy	Surgery	5-10 ml or aspirate	Sterile container with 1 ml of saline (non-bacteriostatic)		
Urine					
Routine voided	Instruct carefully. Early morning clean voided midstream specimen is best	1 ml urine	Sterile container or clean catch kit or urine transport container	Clean genital area well. Discard first portion of urine stream. Collect midstream specimen	Refrigerate if there is a delay in transport
Catheter or ileal loop collection	Disinfect tubing with alcohol	1 ml urine	Sterile container	Aspirate through tubing with a syringe	Refrigerate if there is a delay in transport
Bladder urine suprapubic	Betadine®	1 ml urine	Sterile container or sterile red top if anaerobic culture requested	Collected by needle aspiration or cystoscopy	Deliver immediately to lab
Cystoscopic	Betadine®	1 ml urine	Cytoscopy/sterile container		Refrigerate if there is a delay in transport

MICROBIOLOGY TEST LISTING QUICK REFERENCE

Test	Specimens	Collection and Transport Device	Comments
Routine Bacteriological Exam or Culture			
Aerobic and anaerobic culture (combined)	Bile swabs Surgical swabs Aspirates Swabs of fluids Sterile body sites Deep wounds Deep Abscess	CultureSwab®	Gram stain included Send to lab immediately. Indicate "anaerobic culture" on test requisition form
Beta strep culture (for the isolation of group A or B streptococci only depending on site)	Throat swab Cervical swab Vaginal / rectal	CultureSwab®	No Gram stain
Blood culture	Blood Bone marrow	Aerobic and anaerobic blood culture bottles	No Gram stain
Bronchial culture	Bronchial washings, brushings, lavage	2.5 oz sterile container	Gram stain included
Cath tip culture	Cath tips: UAC, IV, CVP	2.0 oz sterile container	No Gram stain
Chlamydia Amplified DNA Probe (only one swab required for both GC and Chlamydia probe assays)	Endocervical Male urethral Urine	Male or female BD ProbeTec™ Or Urine stored at 2-8° C Or ThinPrep	Special collection requirements
<i>Clostridium difficile</i> toxin assay	Stool Rectal or colon washings	Clean vial or plastic carton	Use clean container, no preservative. Testing will not be performed on duplicate orders received within a 24 hour period, patients that have tested positive within past 7 days, or on formed stools.
CSF culture	CSF Ventricular fluid	2.5 oz sterile container	Gram stain included
Environmental culture	Environmental specimen	CultureSwab® Water sample 100 mL	No Gram stain
Eye culture	Any specimen from the eye	CultureSwab®	Gram stain included For vitreous fluid, order Fluid culture
Fluid culture	Blood bag Aspirates Fluids Bile Abscess in syringe Vitreous fluid	2.5 oz sterile container	Gram stain included
Fluids in blood culture bottles	Fluids sent in blood culture bottles	Aerobic and anaerobic blood culture bottles	No Gram stain
GC culture (for the isolation of <i>N. gonorrhoeae</i> only)	Cervix Urethra Throat Eye in baby Anal	CultureSwab®	No Gram stain; order if required. Transport to lab immediately

Test	Specimens	Collection and Transport Device	Comments
GC Amplified DNA Probe (Only one swab required for both GC and Chlamydia probe assays)	Endocervical Male urethral Urine	Male or female BD ProbeTec™ Or Urine stored at 2-8° C Or ThinPrep	Special collection requirements
Genital culture	Cervix / vagina Urethra / penis	CultureSwab®	Gram stain included
Gram stain	Any specimen	2.5 oz sterile container	Gram stain only
Legionella culture	Bronchial washing Biopsies Lavages	2.5 oz sterile container	DFA stain included
OSRA/MRSA (SACUL)	Any specimen	CultureSwab®	No Gram stain
Quick group A strep screen (for rapid detection of group A strep)	Throat	CultureSwab®	If negative, a beta culture will be done at an additional charge
Sputum culture	Sputum Tracheal aspirates Luken's trap	Sterile container	Gram stain included
Staphylococcus aureus	Any specimen	CultureSwab®	No Gram stain
Stool culture (includes the following pathogens: Salmonella, Shigella, Yersinia and Campylobacter. If Vibrio and E. coli OH 157 is requested, please put in special request)	Stool Colon washings Rectal swab	ParaPak® for culture and susceptibilities	No Gram stain
Surveillance culture (for special organism detection, except ORSA/MRSA and VRE)	Any specimen	CultureSwab®	Note which organism is to be cultured. No Gram stain
Throat culture	Throat Nasopharyngeal	CultureSwab®	No Gram stain
Urine culture (includes colony count)	Urine: Suprapubic Cysto Clean catch Catheter	Vacutainer® urine C&S transport kit for midstream specimens; 2.5 oz sterile container; sterile red top vacutainer for supra-pubic aspirates	No Gram stain. Please note urine type (i.e., cath, clean catch) on requisition
Vancomycin Resistant Enterococci (VRE)	Any specimen	CultureSwab®	No Gram stain
Wound culture (superficial)	Swabs of: Abscesses Decubiti Ulcers Lesions	CultureSwab®	Gram stain included
Mycobacteriological (AFB) Exam or Culture			
AFB Blood culture	Blood Bone marrow	Acid-fast blood culture bottle	AFB stain not included; special bottle needed
Acid-fast culture	Any specimen (except blood)	2.5 oz sterile container; sputum collection system	AFB stain included
Acid-fast bacilli strain	Any specimen	2.5 oz sterile container	AFB stain only

MICROBIOLOGY

Test	Specimens	Collection and Transport Device	Comments
Mycology or Fungal Exam or Culture			
Blood culture for yeast	Blood	Aerobic blood culture bottle, blue top	No fungal smear
Fungus culture	Any specimen (except blood)	2.5 oz sterile container CultureSwab®	Fungus stain not included; fungus smear or KOH must be ordered separately
Fungus stain	Any specimen	2.5 oz sterile container	Fungus smear only
KOH prep	Any specimen	2.5 oz sterile container	KOH prep only; fungus culture must be ordered separately
Parasitology			
Cryptosporidium specific antigen	Stool	2.5 oz sterile container or EcoFix	Do not submit in PVA preservative
Cyclospora exam	Stool	2.5 oz sterile container or EcoFix, Refrigerate	Do not submit in PVA preservative
Giardia specific antigen	Stool	2.5 oz sterile container or EcoFix	Do not submit in PVA preservative
Ova and Parasite exam	Stool	ParaPak® EcoFix for Ova and Parasites	Can be used for all parasites
Pneumocystis exam	Respiratory secretion	2.5 oz sterile container	
Viral Exam			
Adenovirus antigen	Nasopharyngeal aspirate or washing	Sterile container	Refrigerate
Chlamydia culture	Cervical swab Urethral swab Conjunctival swab	Viral/Chlamydia transport media	Do not use wooden-shafted swabs. Refrigerate after collection and transport on wet ice
Cytomegalovirus (CMV culture)	Urine: Any specimen: Buffy Coat	2.5 oz sterile container; Swab or secretion in Viral Transport media; 5 ml of EDTA whole blood	Refrigerate
Herpes simplex culture	Vaginal / cervix Urethral / penis Vesicle fluid Ulcerated lesion	Viral / Chlamydia Transport Media	Must specify source and transport on wet ice
Herpes, direct smear	2 prepared slides of cellular material obtained from the base of fresh lesion	Slide	Refrigerate
Influenza antigen	Nasopharyngeal aspirate; Nasopharyngeal washing	Sterile container	Refrigerate
Parainfluenza antigen	Nasopharyngeal aspirate; Nasopharyngeal washing	Sterile container	Refrigerate
Respiratory Syncytial Virus (RSV)	Nasopharyngeal aspirate; Nasopharyngeal washing	Sterile container	Refrigerate. Do not use wooden shaft swabs
Rotavirus detection	Stool Rectal or colon washing	Clean vial or plastic carton	Refrigerate
Tzanck prep (for herpes inclusion bodies)	Any specimen	Fixed slide	See Cytology section

Test	Specimens	Collection and Transport Device	Comments
Varicella Zoster direct smear	1 prepared slide of cellular material from the base of fresh lesion	Slide	
Viral culture	Any specimen	Viral Transport Media	Refrigerate
Viral serology	See Alphabetical Test List for collection instructions		See individual test listings

Miscellaneous Stool Exam

Leukocyte or pus exam	Stool Rectal or colon washing	Clean vial or plastic carton	
Occult blood	Stool	Clean vial, plastic carton, or Hemocult slide	DO NOT mail Hemocult slide to lab. Test request form must accompany specimen to the lab
Phenolphthalein exam	Stool	Clean vial or plastic carton	
pH exam	Stool	Clean vial or plastic carton	
Qualitative fat	Stool	Clean vial or plastic carton	
Reducing substances	Stool	Clean vial or plastic carton	

CYTOLOGY

Cytology tests include:

Aspirations, Direct Smear	PAP Smear (Cervical/Vaginal)
Body Fluids (Other than Urine, Sputum, or Cerebrospinal Fluid)	Sputum Cytology
Cerebrospinal Fluid Cytology	Tzanck Test (Viral Inclusions)
Fine Needle Aspiration (Interpretation)	Urine Cytology

Requests for cytological examination can be made on the test request in the Cytology area of the form. All supplies and fixatives needed to properly preserve the specimen will also be provided. Obtaining an adequate specimen, preserving the specimen properly, and providing the patient's medical history is essential.

All slides must be labeled, in pencil, with the patient's name.

The Pap smear is a screening technique to aid in the detection of cancer and cancer precursors, and is not considered to be an absolutely diagnostic procedure. Any visible lesion should be biopsied.

Recommendations for Non-Gynecological Specimen Collection

Submit fresh urine specimens for cytology in a preservative fluid (buffered methanol) using equal volumes of fluid and urine. Sputum should be submitted in Saccomanno's fixative (green or blue solution). Cerebrospinal fluid for Cytology must be submitted immediately and with **no additives and refrigerated**. Smears from non-gyn sites (nipple secretions, etc.) should be fixed immediately with spray fixative. For other nongynecological specimen requirements, see the Alphabetical Listing of Tests.

Fine needle aspiration cytology has become an important diagnostic tool. We urge clinicians with locations convenient to St. Vincent's Medical Center to make use of a fine needle aspiration suite, which has direct support of a pathologist and cytotechnologist. Aspirations performed in your office will, of course, be accepted for interpretation. For details in aspiration technique, please contact our pathologist.

We recommend immediate spray fixation or 95% ethyl alcohol fixation. Information about fixation technique (air-dried, smears, spray-fixed) is vital to proper handling of the smear. Clinical impression and precise anatomic source are also vital aspects of the interpretation of these specimens.

Recommendations for Gynecological Specimen Collection

Consolidated Laboratory Services offers both conventional and thin layer Pap smear testing.

Thin Layer Methodology (ThinPrep®) – Because of the many artifacts associated with conventional Pap smear preparations and the limitations created by heavy inflammation, blood, or thick smear preparation, thin layer methodology has been demonstrated to be more sensitive in the detection of cervical dysplasia. Specimens are collected using a brush/spatula or broom-like device that is swished into a vial of preservative fluid. The vial is then capped, labeled, and sent to the lab for analysis.

Conventional Pap Smear – Excessive lubricant should be avoided. Vaginal pool material is collected first and a drop placed at the end of the slide. A circular scraping of the cervical junction is then obtained and mixed with the vaginal pool drop on the slide. The drops are then smeared twice rapidly and immediately fixed with spray fixative. Slide(s) must be labeled with the patient name written in pencil.

Unacceptable specimens are defined as:

- No patient ID on either slide or requisition
- No date of birth
- No account/physician name/number
- Slide broken beyond repair on receipt
- Slide/requisition separated on receipt and neither properly identified
- Conflict between name of patient on specimen and name on requisition
- Specimen not properly preserved

Report Format for Gynecological Specimens

Consolidated Laboratory Services has adopted the Bethesda System 2001 for reporting cervical/vaginal cytology results.

Our Cytology reports contain the following elements:

1. A statement of adequacy of the specimen for diagnostic evaluation
 - Satisfactory
 - Unsatisfactory (reason is provided)
2. A general categorization of the diagnosis
 - Negative for intraepithelial lesion or malignancy
 - Epithelial cell abnormality
3. The descriptive diagnosis if applicable. This will specifically describe the following:
 - Abnormalities
 - Presence of infection, reactive and reparative changes
 - Reason(s) for unsatisfactory smear;
 - too few squamous cells
 - poor preservation
 - totally obscured by blood or inflammation

Quality Assurance

Consolidated Laboratory Services provides a **history search** on **all** gyn and non-gyn specimens and a follow-up program for gyn cases of dysplasia or suspected malignancy.

Our **history search program** gives us the opportunity to review **all** previous results in our files.

Our follow-up program provides the physician a second opportunity to receive notification of an abnormality in the unlikely event that the original report is not received or lost. Follow-up information returned from you confirms that our follow-up letter has been received and allows us to update our files.

Proper management of suspected cervical dysplasia is a complex diagnostic algorithm. Mistakes can occur at any stage of the management process. We strongly urge our clients to maintain their own tracking mechanism for pending Pap smears. Considerable clinical judgment is required for proper management of any abnormal result.

The pathologists welcome any request for review and discussion of abnormal findings. The finding of "atypical squamous cells of undetermined significance" often creates diagnostic confusion. These represent abnormal cells that do not fulfill the criteria required for diagnosis of dysplasia. While these frequently represent various metaplastic or reparative changes, these cells can also represent high grade dysplasia and even invasive squamous carcinoma.

Human Papilloma Virus (HPV) Testing

Use of the ThinPrep® Pap test system provides clients with the ability to perform both PAP and HPV testing from the same collection vial. Using CLS standard test requisition form, clients may elect to have the laboratory automatically perform HPV testing if the Pap results are determined to be high risk or performed regardless of HPV results.

SURGICAL PATHOLOGY

Surgical Pathology tests include:

Bone Marrow Pathology	Gross and Microscopic, Level II
Estrogen, Progesterone Receptor Group	Gross and Microscopic, Level III
Frozen Section	Gross and Microscopic, Level IV
Gross Pathology Exam	Gross and Microscopic, Level V
	Immunofluorescence, Direct

The laboratory provides 10% neutral buffered formalin bottles for general histology purposes. Other specialized fixatives, such as Hollande's for testicular biopsies, are available upon request. We recommend neutral buffered formalin for all other specimens unless specialized studies (such as lymph nodes for flow cytometry or cultures) are anticipated.

Specimens and requisitions should be labeled with the patient's name, age, sex, source of specimen and physician's name.

Most routine specimens require approximately one (1) working day after receipt for diagnosis to be made. If a specimen needs special stains or other procedures, the turnaround time will increase.

Miscellaneous Surgical Specimens

10% neutral buffered formalin is the preferred fixative for surgical specimens. Larger specimens (>3 cm in diameter) should be refrigerated if undue delay in delivery is anticipated.

Bone Marrow Aspirates

Specimen requirements: Minimum of three (3) slides for routine testing. Minimum of six (6) slides if enzyme stains are requested.

Allow slides to air dry before placing in cardboard slide holder or other protective transport container. Slides must contain bone marrow spicules.

Bone Marrow Biopsies

Specimen requirements: 10% neutral buffered formalin and clinical data.

Bone marrow biopsies should be placed in 10% neutral buffered formalin. If submitted, the clot should be placed in a separate container of 10% neutral buffered formalin. Both containers should bear patient's identification. The test request form should include all pertinent information (e.g. clinical data). It is helpful to include as much information as possible. When indicated, each biopsy will receive iron stains as well as routine hematoxylin and eosin. It is up to the discretion of the pathologist to order additional studies or special stains.

Breast Biopsies

Specimen requirements: Fresh tumor delivered in a timely manner (within 30 minutes of removal); patient identification and pertinent information.

All breast biopsies should be submitted fresh for intraoperative evaluation unless the surgeon is satisfied he/she is dealing with an innocuous lesion (e.g. lipoma). Any abnormal mammogram should be transmitted to the pathologist to help direct the examination. The pathologist may elect not to freeze the tissue after telephone consultation with the surgeon. Estrogen and progesterone receptor, HER2NEU, and DNA analysis will be performed on all invasive tumors.

Flow Cytometry

Specimen requirements: Blood/bone marrow specimens should be submitted in either a lavender tube (LAV) or lithium heparin tube (GNL). Body fluid specimens such as pleural fluids should be submitted in a sterile container without additive. Refrigerate but do not freeze.

Tissue or lymph nodes should be submitted wrapped in saline moistened gauze placed into a sterile container with wet ice and delivered STAT to the lab. Tissue and lymph nodes may also be submitted in RPMI tissue culture media.

A relevant patient history and diagnosis should accompany all specimen types.

Frozen Sections

Specimen requirements: Fresh, unfixed tissue, clearly labeled with the patient's name and anatomic source; and telephone number where results should be transmitted.

Frozen sections are available Monday-Friday, 8:00AM – 5:00PM and at other times by special request. The specimen should be delivered fresh (no fixative) directly to St. Vincent's Medical Center Histology Laboratory, or the courier must be informed the case is for "immediate frozen section diagnosis". Please allow 30 minutes for delivery and processing. Results will be telephoned to your office.

Gastrointestinal Biopsies

Specimen requirements: We recommend neutral buffered formalin for all routine specimens.

We recommend the use of our GI Endoscopic biopsy form (available upon request) in addition to the standard requisition. A PAS/AB mucin stain will be performed on upper gastrointestinal biopsies as well as an immunoperoxidase stain (for detection of *Helicobacter* on all gastric biopsies).

Gynecologic Tissue Specimens

Specimen requirements: 10% neutral buffered formalin along with clinical and hormonal history.

Cervical biopsies, endometrial biopsies, and curettage should be submitted in 10% neutral buffered formalin along with complaint (e.g. metrorrhagia) and hormonal therapy history.

Immunofluorescence (Skin, Conjunctiva, Mucosa)

Specimen requirements: Zeus transport medium, anatomic source (lesional perilesional); and suspected clinical diagnosis. Tissue immunofluorescence specimens should be submitted in Zeus transport medium available from the laboratory. Biopsy must be identified with anatomic site, as well as whether biopsy is intralesional, perilesional, or remote from the lesion. Suspected clinical diagnosis is required.

Lymph Nodes, Diagnostic

Specimen requirements: Prompt delivery of fresh, sterile lymph node and clinical history.

Proper evaluation of lymph nodes requires access to fresh sterile tissue. Material should be hand delivered or sent by courier for immediate delivery (send as if for frozen section). Clinical information should include the extent and duration of lymphadenopathy, and other associated diseases (lupus, AIDS), and suspected diagnosis. It is recommended the case be discussed with the pathologist prior to the procedure. If microbiology culture is desired, this should be stated, as it will not automatically be performed on all submitted lymph nodes. Either fresh or frozen tissue will be requested for flow cytometry or immunologic markers, depending on histologic findings.

Skin Biopsies

Specimen requirements: Properly labeled 10% neutral buffered formalin, anatomic source, specifics as to orientation of biopsy, and specimen requisition.

Shave excisions, curettage, wedge excisions, and punch biopsies should all be submitted in 10% neutral buffered formalin. Anatomic source and any required orientation should be provided along with clinical diagnosis. Margin evaluation is performed upon request on excisional biopsies.