Trinity Health

LABORATORY USER AND SPECIMEN COLLECTION MANUAL

TRINITY HEALTH MICHIGAN-ANN ARBOR

July 2025

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-3141

The Laboratories of Trinity Health Michigan are CLIA-certified and accredited by the College of American Pathologists.

This manual was reviewed and approved by:

Joseph Tworek, M.D.

Joseph Tworek, M.D., Medical Director

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1. GENERAL INFORMATION

The Laboratories of Trinity Health Michigan strive to provide high quality and efficient medical diagnostic laboratory services to providers and their patients. Our mission is to improve the overall health of our community, while stewarding the health care resources entrusted to us.

There are several convenient laboratory locations, with flexible hours to meet our patient's needs. Hours vary by location. We advise you to always call ahead to ensure the lab location is open and hours have not changed.

TRINITY HEALTH LAB - BRIGHTON
7575 W. Grand River
Brighton, MI 48114
Phone: (810) 844-7522 Fax: (810) 844-7523
Monday - Friday: 7:00 am – 5:30 pm
Saturday 7:00 am – 12:00 pm

TRINITY HEALTH LAB - CANTON
1600 S. Canton Center Rd, Suite 110
Canton, MI 48188
Phone: (734) 398-7575 Fax: (734) 398-8657
Monday - Friday: 7:00 am – 5:00 pm
Saturday 7:00 am - 12:00 pm
Closed Daily: 12:00 pm - 1:00pm

CHELSEA HOSPTIAL LAB - PROFESSIONAL BUILDING
14650 Old US 12 Suite 102
Chelsea, MI 48118
Phone: (734) 593-5950 Fax: (734) 475-8424
Hours: Monday - Friday 7:00 am – 4:00 pm
Saturday 7:00 am – 12:00 pm

TRINITY HEALTH LAB - CHERRY HILL
49650 Cherry Hill Rd
Canton, MI 48187
Phone: (734) 398-8160 Fax: (734) 398-8162
Monday-Friday: 8:00 am – 5:00 pm
Closed Daily: 12:30pm - 1:30 pm

TRINITY HEALTH LAB - DOMINO'S FARMS
4200 Whitehall Drive Suite 100
Ann Arbor, MI 48105
Phone: (734) 712-7136 Fax: (734) 712-7181
Monday - Friday: 8:00 am –5:00 pm
Saturday 7:30 am - 12:00 pm
Closed Daily: 12:30pm - 1:30 pm

TRINITY HEALTH LAB - FOWLERVILLE
202 E. Van Riper Rd Ste 300
Fowlerville, MI 48836
Phone: (517) 223-3716 Fax: (517) 223-3869
Hours: Monday - Friday 8:00 am – 12:00 pm

TRINITY HEALTH LAB - GENOA CENTER
2305 Genoa Business Park Ste 130
Brighton, MI 48114
Phone: (810) 844-7665 Fax: (810) 844-7677
Monday - Friday 8:00 am - 12:00 pm;
1:00 pm - 5:00 pm

TRINITY HEALTH LAB - LIVINGSTON HOSPITAL
620 Byron Road
Howell, MI 48843
Phone: (517) 545-6350 Fax: (517) 545-6205
Monday - Friday: 7:00 am – 6:00 pm
Saturday 7:00 am - 12:00 pm

TRINITY HEALTH LAB - MILAN
870 E. Arkona Rd Ste 130
Milan, MI 48160
Phone: (734) 712-1270 Fax: (734) 439-0658
Monday-Friday: 8:00 am – 5:00 pm
Saturday 8:00 am - 12:00 pm
Closed Daily: 12:30pm - 1:30 pm

TRINITY HEALTH LAB - PLYMOUTH
990 West Ann Arbor Trail
Plymouth, MI 48170
Phone: (734) 414-1050 Fax: 734 414-1055
Monday - Friday: 7:30 am – 5:00 pm

TRINITY HEALTH LAB - REICHERT MEDICAL CENTER
5333 McAuley Drive, Suite 1007
Ypsilanti, MI 48197
Phone: (734) 712-5180 Fax: (734) 712-7071
Monday - Friday 7:00am-6:00pm
Saturday 7:00 am – 12:00 pm

TRINITY HEALTH LAB - WEST ARBOR
4350 Jackson Rd, Suite 110
Ann Arbor, MI 48103
Phone: (734) 712-9620 Fax: (734) 332-1914
Monday - Friday: 8:00 am - 5:00 pm
Saturday 7:00 am - 12:00 pm
Closed Daily: 12:30pm - 1:30 pm

LABORATORY TELEPHONE NUMBERS AND KEY PERSONNEL,

PATHOLOGY DEPARTMENT	734-712-3128
Medical Director, Clinical Laboratory and Medical Director, Microbiology	Joseph A. Tworek, MD
Medical Director, Blood Bank	John Sherbeck, MD
Medical Director, Chemistry	Matthew Wasco, MD
Medical Director, Hematology	Amelia Manley, MD
Medical Director, Point of Care	Sharon Bihlmeyer, MD

MAIN LABORATORY TELEPHONE MAIN LABORATORY FAX		
Director of Laboratory Services		734-712-3929
Client Service Representatives		723-712-3141
Laboratory Information Systems		734-712-2288
Laboratory Quality Manager		734-712-3929
LABORATORY DEPARTMENTS		
Anatomic Pathology/Cytology		734-712-2740
Anatomic Pathology/Cytology		734-712-2740
Blood Bank		734-712-3185
Blood Bank Manager		734-712-5061
Chemistry		734-712-3138
Chemistry and Hematology Manager		734-712-3138
Coagulation and Urinalysis		734-712-3138
Phlebotomy Manager		734-712-5184
Microbiology		734-712-4235
Microbiology Manager		734-712-3156

HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996 (HIPAA)

Trinity Health Michigan Laboratories are committed to safeguarding the privacy and confidentiality of our patients' health information (PHI) in accordance with the Health Insurance Portability and Accountability Act (HIPAA) of 1996. Adherence to all privacy, security and electronic transaction guidelines ensures the protection of PHI and contributes to a high standard of care.

2. TEST REQUESTS

ORDERING LABORATORY TESTS

INPATIENT ORDERS

Inpatient orders are placed electronically through the EPIC hospital information system. During epic-downtimes, a manual downtime requisition is used. contact the laboratory to obtain downtime requisitions.

OUTPATIENT ORDERS

Outpatient orders may be placed electronically or may be marked on a laboratory requisition form.

Every laboratory request must include the following:

- Patient's name (first and last)
- Date of birth
- Sex
- Tests requested.
- Date and time of collection
- Source of specimen (if pathology & microbiology sample)
- Requesting physician name.

In addition, outpatient requisitions must include the following:

- Diagnosis code
- Billing information
- Physician/provider signature

Written Authorization: Federal regulations require written authorization for every laboratory test performed within 30 days of a verbal request. You will be asked to forward a signed order via fax or mail for all verbal requests.

Specimen Retention/Test Additions

Most specimens are retained for several days. To add tests or request retesting contact the Laboratory. Some add-on test orders may be placed in EPIC. Completion of add-on test or repeat testing will depend on specimen stability and remaining sample volume.

Reflex Testing

Reflex testing occurs when initial test results are positive or outside normal parameters and indicates that a second related test is medically appropriate. Tests for which this reflexive follow-up is done will be noted in this manual. The hospital Medical Executive Committee has approved these tests.

For outpatient orders see APPENDIX B for information on ICD-10 codes, Standing Orders and ABNs.

OUTPATIENT REQUISITIONS See APPENDIX B

General Laboratory Requisition
Cytology/Pathology Requisition
Surgical Pathology Requisition

APPROVED INPATIENT STAT LIST

Albumin	Glucose, serum, or CSF	Drug Screen – serum • Ethanol (quantitative) • Acetaminophen (quantitative) • Salicylates (quantitative) • Tricyclics (qualitative) .
Alkaline Phosphatase	Gram Stain (CSF)	
Ammonia	Group B Strep Antigen (CSF)	
Amylase (serum)	HCG – serum and urine (qualitative)	
Bilirubin, Total and Direct	Influenza Ag Testing	• Drug Screen – urine. • Opiates (qualitative) • Cocaine (qualitative) • Benzodiazepine (qualitative) • Amphetamines (qualitative) • Barbiturates (qualitative
BNP	Iron	
BUN	Lactic Acid	
Calcium	Lithium	
Ca++ (ionized)	Magnesium	
Carbon Monoxide	Methemoglobin	
CBC w/auto differential	Osmolality	
Cell count (CSF)	Partial Thromboplastin Time (PTT)	
CK, Total	Potassium, serum	
Chloride, serum, or CSF	Prothrombin Time (PT)	
Creatinine, serum	RSV	
Digoxin	Salicylates	
Dilantin®	Sodium, serum	
D Dimer	Strep Screen	
Electrolytes	Theophylline	
Ethanol	Troponin I	
FFN- Fetal Fibronectin	Urinalysis	
Fibrinogen	Valproic acid	
	Vancomycin	

APPROVED OUTPATIENT STAT LIST

Albumin	CK	Phenytoin
Alkaline Phosphatase	Chloride	Phosphorus
Amylase	***Comprehensive***	Potassium
Basic Metabolic Panel	Creatinine	Protein, Total
Bilirubin, Total/Direct	GOT (SGOT/AST)	PT
BNP	GPT (SGPT/ALT)	PTT
BUN	HCG serum and urine	***Renal Panel***
Calcium	Lithium	RSV
Carbamazepine (Tegretol)	***Liver Function Panel***	
CBC with Platelet	Magnesium	
CBC with auto differential	Phenobarbital	

3. SPECIMEN COLLECTION

LABELING OF SPECIMENS

To ensure the proper specimen identification it is essential that each tube or container be legibly labeled with the following information

- Patient's first and last name
- Date of birth Date and time of collection
- Initials/NAME of person collecting specimens
- Site and type of specimen (For Microbiology specimens, tissue biopsies, excisions, and cytology)
- Cytology slide specimens require that the site and source be noted on the slide(s) in pencil.
-

The College of American Pathologits (CAP) and the Joint Commision for Accreditation of Hospitals require that **TWO PATIENT IDENTIFIERS BE PRESENT ON ALL SPECiMENS.**

NOTE:Blood Bank Specimens require special labeling. See Appendix A for details.

Patient Identifiers	
Primary	• Patient Name • EPIC Medical Record Number (MRN)
Secondary	• Date of Birth (DOB) • Social Security Number (SSN) • Requisition Tag Number/Non-Epic EMR Requisition Number
UNACCEPTABLE	**CAN NOT BE USED** • Sex • Sources/Sites • Physician Name • Allergies

INPATIENTS:

- All original specimen labeling should happen at bedside using the appropriate PPID protocol. See Appendix A.
- All specimens must have a barcoded EPIC Beaker label upon arrival in the laboratory.
- Retrievable specimens such as blood, urine and stool which are sent with a PLUE (demographics label) or any other form of labels, other than a Beaker label, will be rejected and sent for Redraw/recollection.

- **Exception:** In Epic/Beaker downtime situations, it is acceptable for specimens to be labeled with a patient demographics (PLUE) label. Date/time and collectors initials must be on the label as well.

OUTPATIENTS:

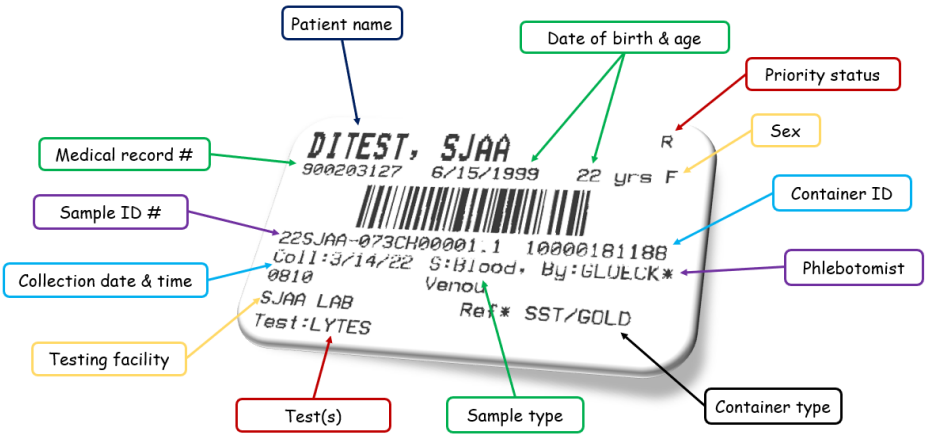
- All specimens collected at the Outpatient draw sites must be sent to the laboratory with a Beaker label.
- **Downtime Exception**
  Handwritten labels are acceptable and must have:
  - ✓ At least two (2) identifiers, one of which must be a **primary identifier.**
  - ✓ Collection date/time
  - ✓ Initials of the collector

TRINITY-AFFILIATED PROVIDERS USING EPIC:

- All specimens must have a barcoded Beaker label upon arrival in the laboratory.

- **Exception:** Specimens may be labeled with:
  - ✓ A patient demographics (PLUE) label,
  - ✓ collection date/time,
  - ✓ collector's initials. **OR**
- Handwritten labels with at least two (2) identifiers, one of which must be a primary identifier, collection date/time and initials of collector

EPIC BEAKER LABEL



NON-EPIC PROVIDERS:

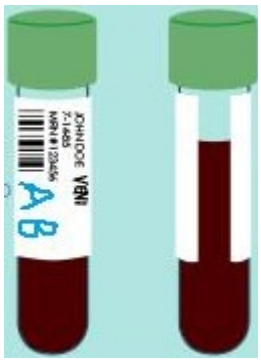
Handwritten labels and office EMR labels are acceptable if the specimen has:

- ✓ At least two (2) identifiers, one of which must be a **primary** identifier.
- ✓ Collection date and time

These specimens will receive an EPIC Beaker label after registration in the laboratory,

Trinity Health Michigan Laboratories-Visual Aid

LABELING OF BLOOD SPECIMENS

ACCEPTABLE	UNACCEPTABLE
Affix Labels: Straight. Top of the tube, i.e., place label directly under cap. Put label over existing label on tube. Leave visible window so blood can be seen. One label/tube. Collect date and time and collector name/initials must be on label or paperwork. 	      Labeling is important because of automated instruments in the lab. **Improperly labeled tubes may cause result delays.**

PROCEDURE: SPECIMEN LABELING	REVISED: 12/29/24 CAY	Trinity Health

ORDER OF DRAW

ORDER	TUBE TYPE	INVERT TO MIX	DRAW VOLUME	CLOTTING TIME
1	Blood Culture Vials  **Draw aerobic first**	8-10 TIMES	10 mL per Vial (0.5 -3 mL PEDS)	NA
2	Citrate Tubes/Lt. Blue 	3-4 TIMES	2.7 mL	NA
3	Serum Separator Tubes/Gold or Tiger 	5 TIMES	5.0 mL	30 min.
4	Serum Tubes/Red 	5TIMES PLASTIC /0 TIMES GLASS	5.0 mL	60 min.
5	Rapid Serum Separator Tube/Orange 	8-10 TIMES	10 mL	5 min.
6	Plasma Separator Tube/Mint 	8-10 TIMES	4.5 mL	NA
7	Heparin Tube/Green 	8-10 TIMES	4.0-6.0 mL	NA
8	EDTA/Lavender OR PINK 	8-10 TIMES	6.0 mL	NA
9	GRAY 	8-10 TIMES	4.0 mL	NA
10	Other tubes 	Variable	Variable	Variable

BLOOD SPECIMEN COLLECTION

Venipuncture Equipment

- Gloves
- Tourniquet
- Alcohol or alcohol wipes
- Gauze Pads
- Needle – Straight or Butterfly
- Tube Adapters
- Specimen tubes
- Tape or Coban
- Sharps disposal container

Prepare the Patient for Routine Venipuncture

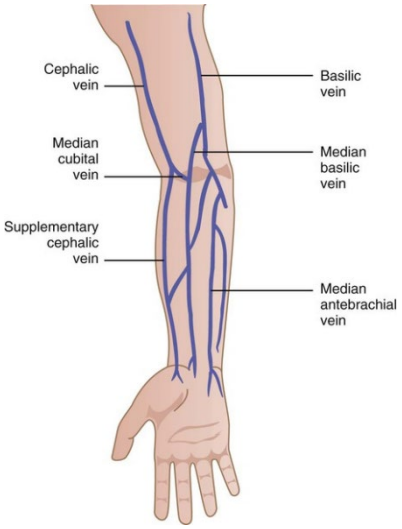
Step	Action
1.	Verify that your patient has an active blood draw order.
2.	Check EPIC for dietary restrictions. *Note: if the test requires fasting make sure these requirements have been followed.*
3.	Reassure the patient and answer any questions they may have.
4.	Sanitize your hands.
5.	Position the patient. • The patient should be in a sitting or reclined position. • The arm should be in a straight extended position. • NEVER perform venipuncture on a patient who is standing.
6.	Don gloves.
7.	Get all necessary blood collection tubes ready checking each expiration date.
8.	Apply a tourniquet to help locate an appropriate venipuncture site. Tourniquets should be placed 4 inches above the draw site and removed after one minute. For vein selection assistance ask your patient to make a fist.
9.	Attach a sterile needed to the vacutainer holder. • Straight needle 21G or 23G – This method attaches directly to a standard vacutainer holder. • Butterfly needle 21G or 25G – This method of blood collection is useful when drawing infants or difficult veins. The butterfly consists of a needle with wings and up to 12 inches of tubing with attaches to a vacutainer holder.
10.	Cleanse the draw site with alcohol in a circular motion starting in the center and working to the outside. Allow alcohol to air dry.

Perform the Venipuncture

Step	Action
1.	**With Straight needle** -Grasp the adaptor with your thumb, index, and middle fingers. Pull the protective cap off with firm pressure pulling away from you exposing your needle. Turn the adapter so that the bevel side of the needle is facing up and ensure the needle is free of burrs.

Step	Action
2.	**With Butterfly needle** – Hold both wings together and remove the sheath from the needle with firm pressure pulling away from you exposing the needle. Ensure the needle is free of burrs and that the bevel is facing up.
3.	The vein should be "fixed" or held taut during the puncture. To do this, place your opposite thumb about an inch below where the needle is to enter and press down on the arm while pulling the skin towards you, your fingers should be wrapped around the patient's arm. The needle should be in line with the vein and at a 15-degree angle.
4.	Insert the needle with a single direct puncture. With your free hand place your collection tube in the vacutainer holder and push the tube to the end to activate the vacuum to draw blood.
5.	Tubes should be filled till the vacuum is exhausted. This ensures the correct ratio of anti-coagulants to blood. As each tube is filled successfully, invert each tube accordingly. Do not shake. Vigorous mixing may cause hemolysis. • SST tubes 5 times • Citrate tubes 3-4 times • All other additives tubes 8-10 times
6.	Once good blood flow is achieved, release the tourniquet, and have the patient release their fist.
7.	If more than one specimen tube is needed, exchange tubes by grasping the tube with your fingers and pushing off the adapter and pulling the tube back
8.	Insert the next empty collection tube in the adapter and repeat the process as needed.
9.	Once the last tube is filled and removed for adaptor, place gauze over the venipuncture site and withdraw the needle immediately engaging the safety and dispose in appropriate container.
10.	Label the collection tubes with appropriate labels. This must be done in the presence of the patients
11.	Check the patients' draw site for bleeding. Once bleeding is done wrap the patient with Coban and instruct them to leave it on for minutes.
12.	Process the specimens according to policy.

Vein Selection



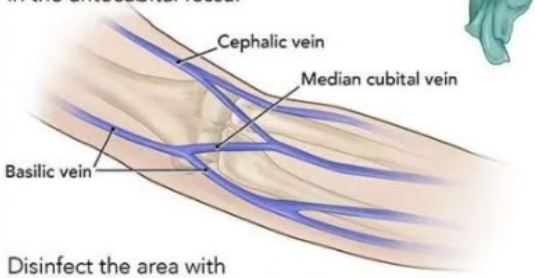
- The diagram below shows the veins most used for venipuncture. These veins are generally large and are close to the skin surface. The median cubital is used most often and is the least painful for the patient. The blood from the cephalic and basilic veins flows slower and tends to roll and bruise easier. Not all veins are suitable for venipuncture, to assist you in your selection:
  - Examine both arms and hands.
  - Have the patient make a fist to make the veins more prominent. Vigorous pumping should be avoided. This may interfere with tests results.
  - Palpate with your index finger.
  - Apply heat to the draw site.
  - Lower the patient's arm over the side of the draw chair.
  - Only keep the tourniquet on for 1 minute.
- Never enter a vein you cannot feel.
- If after you have attempted to draw and were unsuccessful only try once more before asking for assistance

Venipuncture

Blood collection procedure guide

Gather all equipment, wash hands, and put on sterile gloves.

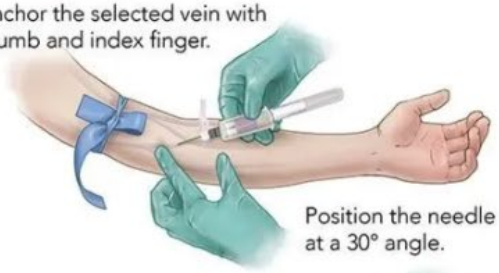
Ask the patient to make a fist and select the venipuncture site in the antecubital fossa.



Disinfect the area with a 70% alcohol swab, working from the center outwards.

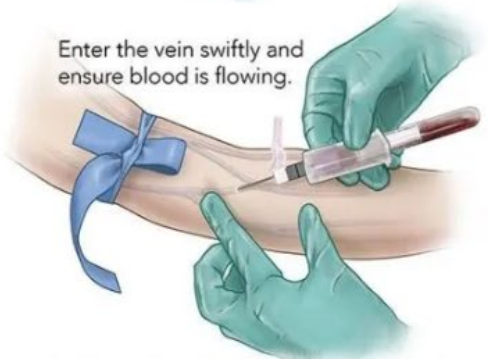
Apply a tourniquet about 3 to 4 inches above the site.

Anchor the selected vein with thumb and index finger.

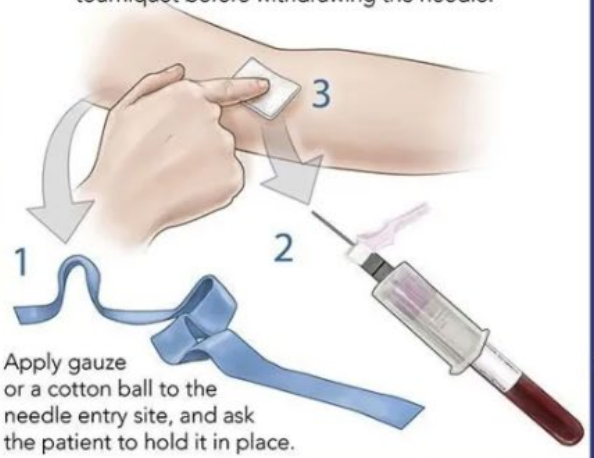


Position the needle at a 30° angle.

Enter the vein swiftly and ensure blood is flowing.



After blood has been collected, release the tourniquet *before* withdrawing the needle.



Apply gauze or a cotton ball to the needle entry site, and ask the patient to hold it in place.

Remove and immediately invert the tube 8 to 10 times to mix the sample with the tube additives.

Discard the used needle in the sharps container.

Remove gloves and wash hands with soap and water.

Label the tube for transport to the lab, indicating:

- Patient's full name
- Patient ID
- Birth date
- Date of sample.

For more information, visit:
World Health Organization Guidelines on Drawing Blood: Best Practices in Phlebotomy

Trinity Health

Vacutainer Tube Guide

Order of Draw

 **BLOOD CULTURE VIALS**	 **BLUE**	 **DARK BLUE** Serum NO Additive	 **RED**	 **GOLD**	 **ORANGE**	 **MINT GREEN**		 **DARK GREEN**	 **LAVENDER**	 **PINK**	 **DARK BLUE** K_2 EDTA
Skin antisepsis is critical Draw discard tube, cleaned with alcohol or CHG prior to collection of blood culture vials Draw aerobic vial first Monitor fill volume using label graduations or syringe graduation	Coagulation ANTI-THROMBIN III* (ACTIVITY) DIMER* FACTOR ASSAYS * FIBRINOGEN * APTT* PT LAC* *SEPARATE AND FREEZE PLASMA NOTES: FOR ACCURATE RESULTS, FILL BLUE TOP TUBE TO THE TOP OF THE LABEL. DRAW A RED DISCARD TUBE PRIOR TO COLLECTING THE BLUE TUBE.	Trace Elements Aluminum Copper Chromium Selenium Zinc **NOTE: SEPARATE AS SOON AS POSSIBLE**	Select Chemistry Tests & <u>OB Tests</u> MSAFP INT ONE INT TWO QUAD FTS SEQ SCR1 INT ONE NT INT TWO NT	Gen Chemistry See Mint Green List Use this if Mint Green/Dark green with yellow ring or the Dark green plan or with black ring are not available.	Troponin	Gen Chemistry AFP TUMOR MARKER ALBUMIN ALK PHOS AMYLASE ANA BAS PANEL BILIRUBIN BUN BHCG CA 125 CALCIUM CEA CK CMP CRP CHOLESTEROL CHLORIDE CREATININE ELECTROLYTES ESTRADIOL FERRITIN FOLATE GLUCOSE HDL HEPATITIS AB HPR (A,B)	HEPATITIS C (HCVR) 1 SST & 1 LAV IGA,IGG,IGM IRON PROFILE LDH LDLD LPT LIPASE LITHIUM MAGNESIUM MONO POTASSIUM PROTEIN PSA RF SYPTPA SYSTEM RUBELLA SGOT(AST) SGPT(ALT) SODIUM TESTOSTERONE TRIGLYCERIDE TSH FT3 FT4 URIC ACID VITAMIN B12 VITAMIN D, 25H	**Ammonia** Transport on ice and deliver within 20 min **Lactic Acid** Specimen good for 30 min on ice, 10 min at room temp **Homocysteine** **Parathyroid Hormone, Intact**	Hematology & BNP HEMOGLOBIN A1C RBC FOLATE SED RATE SICKLE CELL F5L VITAMIN B6 DELIVER TO LAB WITHIN 1 HR. VITAMIN B1 DELIVER TO LAB WITHIN 1 HR. 2 4mL or 1 6mL can be used in place of pink top for Blood Bank	Blood Bank ABO Type & Rh Antibody Screen Direct Coombs DAT Antepartim RHIG Postpartum RHIG 2 ml minimum EPIC: PPID Compliant, Collected, No Override Downtime: B4 band Date, time and collectors first initial and full last name must be on the specimen's demographic label.	<u>Trace Elements</u> Arsenic Cadmium Lead Manganese Mercury RBC Zinc RBC Copper RBC Magnesium

BD Helping all people live healthy lives

BD Microtainer™ Tubes with Microgard™ Closure
Tube Guide and Order of Draw

Catalog #/Closure Color	Additive	Mix by Inverting	Laboratory Use
 365974 Lavender	K_2 EDTA	10x	For whole blood hematology determinations. Tube inversions prevent clotting.
 365965 Green	Lithium Heparin	10x	For plasma determinations in chemistry. Tube inversions prevent clotting.
 365985 Mint Green 365987 Mint Green	Lithium Heparin and Gel for plasma separation	10x	For plasma determinations in chemistry. Tube inversions prevent clotting.
 365992 Grey	$NaFl/Na_2$ EDTA	10x	For glucose determinations. Tube inversions ensure proper mixing of additive and blood.
 365967 Gold 365978 Gold	Clot Activator and Gel for serum separation	5x	For serum determinations in chemistry.
 365963 Red	No additive	0x	For serum determinations in chemistry, serology and blood banking.

365976
Tube Extender

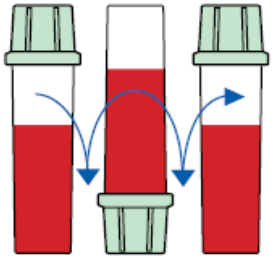
BD Vacutainer Systems
Preanalytical Solutions
1 Becton Drive
Franklin Lakes, NJ 07417

BD Vacutainer Technical Services: 1.800.631.0174
BD Customer Service: 1.888.237.2762
www.bd.com/vacutainer

Processing of Tubes

Why

- Most tubes contain an additive or clot activator that needs to be mixed with the blood sample.
- Tubes with anticoagulants such as EDTA need to be mixed to ensure the specimen does not clot.



How

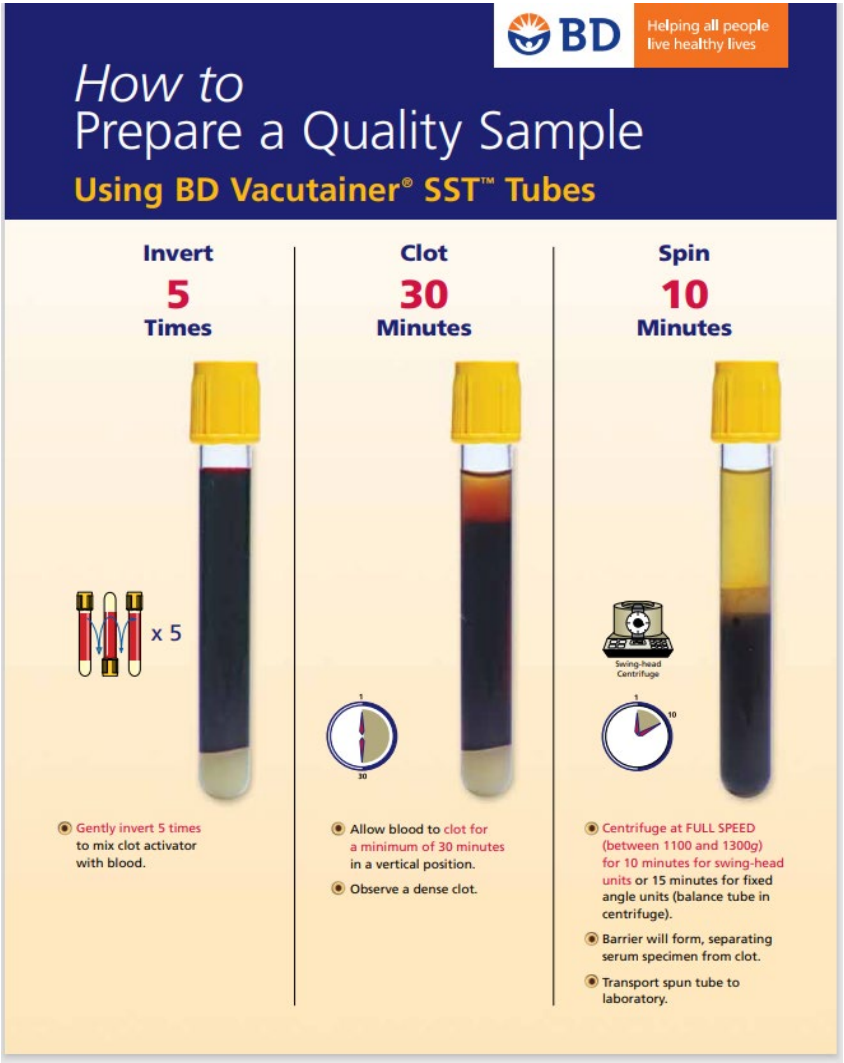
- Holding tube upright, gently invert 180° and back.
- Repeat movement as prescribed for each tube.

When

- Immediately after drawing.

Consequences if not mixed

- Tubes with anticoagulants will clot.
- BD SST™ tubes may not clot completely.
- Specimen will often need to be recollected.

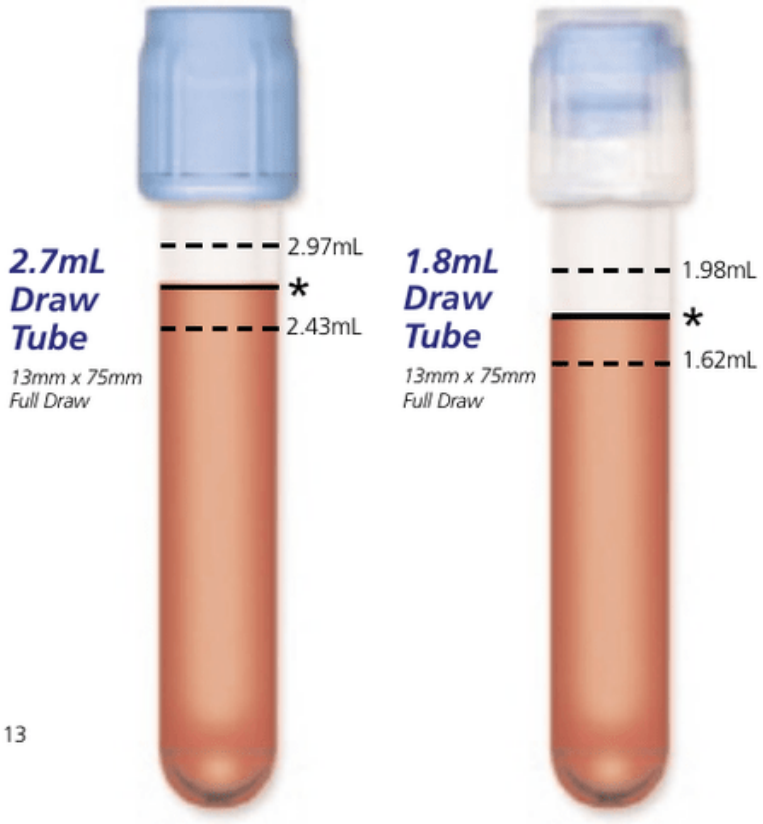


BD Vacutainer™ Plus Plastic Citrate Tube

BD Vacutainer™ Plus Plastic Citrate Tube Draw Volume Guide

Ensure proper draw volume by holding tube up to this guide.

Sufficient volume achieved if blood drawn falls within the dashed minimum and maximum fill lines illustrated on the tubes pictured to the right.



Note: The quantity of blood drawn into evacuated tubes varies with altitude, ambient temperature, barometric pressure, tube age, venous pressure and filling technique.

* ±10% draw and fill accuracy.
NCCLS Dec. '96, Doc. H1-A4, Vol. 16, No. 13

Minimum Amounts for Chemistry & Hematology Testing

CBC or CBCD only:
1mL

Chemistry 1-3 tests:
1mL

CBCD & Sed Rate or
CBCD & HBA1C:
2mL

BD Indispensable to human health

BD Vacutainer™ Blood Transfer Device

Methods of Collection:

If blood is collected into the syringe without using a needle:

- Disconnect the blood-filled syringe from the I.V. port or needleless system used for venous access.

If blood is collected into the syringe using a safety-engineered hypodermic needle (BD Safety-Glide™ Needle or BD Eclipse™ Needle):

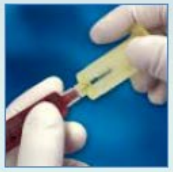
- Draw the blood into the syringe using your institution's procedure.
- Ensure that the needle's safety mechanism has been properly activated.
- Disconnect the blood-filled syringe from the activated safety-engineered needle.

If blood is collected into the syringe using safety-engineered winged collection set (BD Safety-Lok™ Blood Collection Set or BD Saf-T E-Z™ Set):

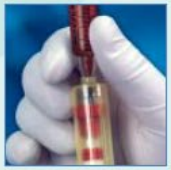
- Draw the blood into the syringe using your institution's procedure.
- Ensure that the wingset's safety mechanism has been properly activated.
- Disconnect the blood-filled syringe from the activated safety-engineered wingset.

Appropriate Transfer:

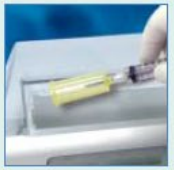
1. Peel off paper backing.



2. Insert syringe tip into hub of device. Rotate syringe clockwise to secure syringe to hub.



3. With the syringe held facing down, center BD Vacutainer™ tube or BD Bactec™ blood culture bottle and push forward into holder of BD Vacutainer™ Blood Transfer Device. Do not depress the plunger of the syringe.



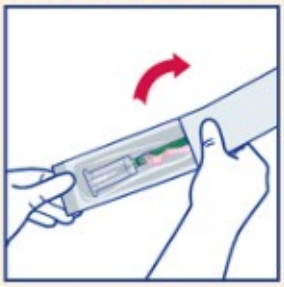
4. After removing the last BD Vacutainer™ tube or BD Bactec™ blood culture bottle, discard entire assembly (BD Vacutainer™ Blood Transfer Device and syringe) in an approved sharps collector in accordance with applicable regulations and institutional policy.

BD Helping all people live healthy lives

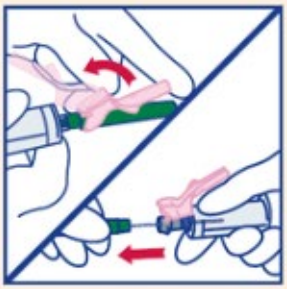
BD Vacutainer® Eclipse™ Blood Collection Needle

with Pre-Attached Holder

Usage of Product



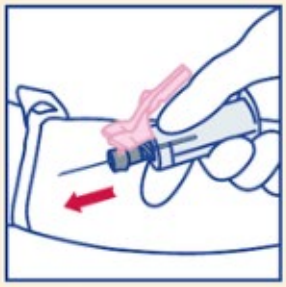
1. Ready to use right out of the package, with no assembly required!



2a. Gently position pink safety shield straight back toward the holder.

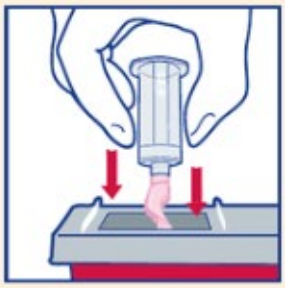
2b. Twist and pull colored needle cap straight off.

Note: The needle bevel is always in position for venipuncture when the pink safety shield is facing up. **DO NOT** twist or rotate the pink safety shield.



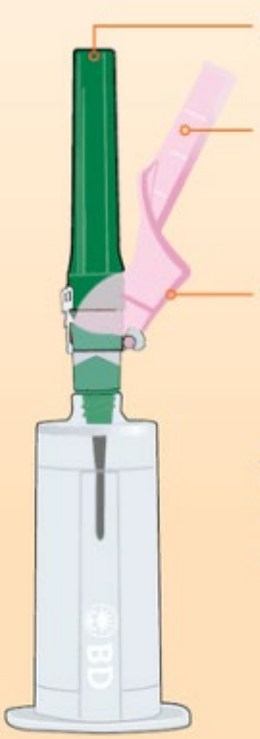
3. Perform venipuncture according to your facility's established procedures.

4. Immediately after removing needle from vein, position thumb squarely on pink safety shield thumb pad and push pink safety shield forward to cover needle. An audible click may be heard. Lock shield into place and inspect. **DO NOT** attempt to engage safety shield by pressing against a hard surface.



5. Discard immediately into an approved sharps disposal container. **DO NOT** remove needle from holder. Dispose of the needle and holder as one unit into nearest sharps container. **DO NOT REUSE.**

BD Vacutainer® Eclipse Blood Collection Needle with Pre-Attached Holder



Ordering Information

Reference Numbers:

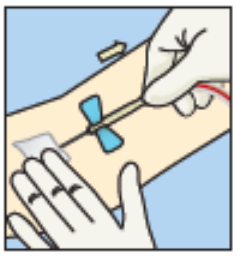
368650	21 G x 1 ¼"	
368651	22 G x 1 ¼"	

FOR SINGLE USE ONLY

BD Global Technical Services: 1.800.631.0174
BD Customer Service: 1.888.237.2762
www.bd.com/vacutainer

BD Vacutainer®
Safety-Lok™ Blood Collection Set

Instructions for Activation: One-Handed Technique



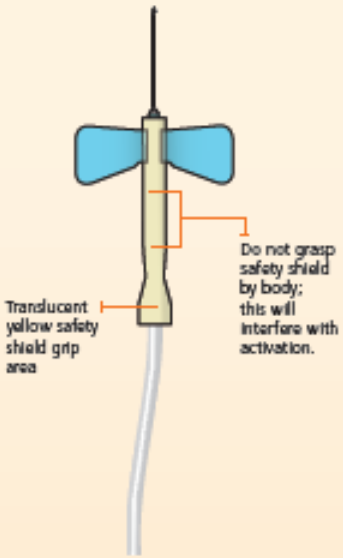
1. Upon completion of collection, apply light pressure to site using three fingers as shown. Remove the Safety-Lok Blood Collection Set by...

2. ...grasping the translucent yellow safety shield grip area with the thumb and index finger while at the same time grasping the tubing securely with the other 3 fingers.

3. Advance translucent yellow safety shield forward with thumb and index finger until the needle is completely covered and a click is heard, indicating that the safety shield is locked in place over the needle tip.

4. Once the safety shield is completely advanced, immediately dispose of the device in an approved sharps container.

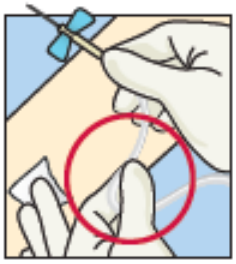
BD Vacutainer® Safety-Lok™ Blood Collection Set



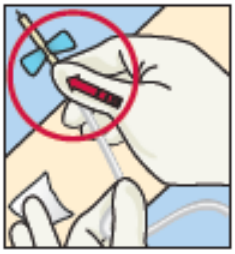
Instructions for Activation: Two-Handed Technique

1. Upon completion of collection, apply light pressure to site using three fingers as shown.

2. Withdraw blood collection set by grasping the translucent yellow safety shield grip area with the thumb and index finger.



3. With the opposite hand, grasp tubing between thumb and index finger.



4. Push the yellow shield forward until the needle is completely covered. An audible click may be heard when the safety shield is locked into place. Discard immediately into an approved sharps container.

CAUTION:
Handle all biologic samples and blood collection "sharps" (lancets, needles, luer adapters, and blood collection sets) in accordance with the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples (e.g., through a puncture injury) since samples may transmit viral hepatitis, HIV (AIDS), or other infectious diseases. Utilize any safety-engineered feature if the blood collection device provides one. Discard all blood collection "sharps" into biohazard containers approved for their disposal.

For more information about this and other specimen collection products, please contact us at:

BD Global Technical Services:
1.800.631.0174
vacutainer_techservices@bd.com

BD Vacutainer® *UltraTouch*™ Push Button Blood Collection Set

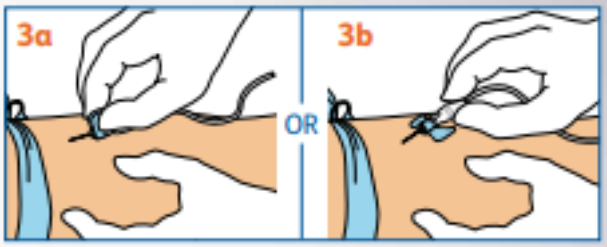
An unparalleled experience for patients and clinicians

General use and disposal (See package insert for detailed directions for use.)

Peel back packaging at arrow so that the back end of the wing set is exposed. With thumb and middle finger, grasp the rear barrel of the wingset and remove from package. Be careful to avoid activating the button.

CAUTION - Never use a blood collection set without a holder or syringe attached.

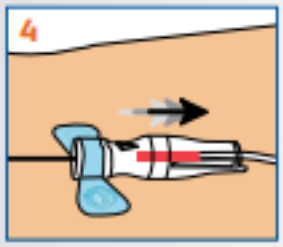
Assemble to BD Vacutainer® One Use Holder or BD Syringe.



With thumb and index finger, grasp the wings together and access vein using standard needle insertion technique.

If preferred by your institution, the body of the device can be held, instead of the wings, during insertion.

The device is designed to be activated while the needle is still in the patient's vein.

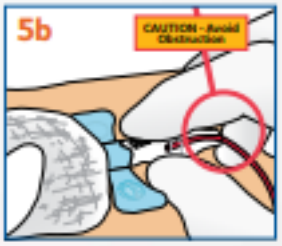


Proper access to the vein will be indicated by the presence of "flash" directly behind and below the button.

Collect the blood specimen according to your facility's procedure.

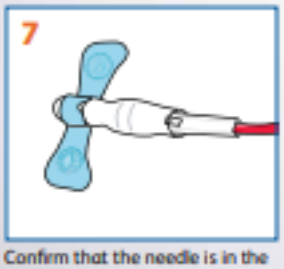
Place your gauze pad on the venipuncture site. Allow gauze pad to cover nose of front barrel. Following the collection procedure, and (**while the needle is still in the vein**), grasp the body with the thumb and middle finger.

Activate the button with the tip of the index finger. The needle will automatically retract from the venipuncture site, confirmed by an audible "click."

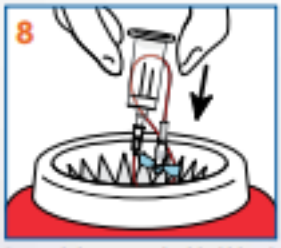


To ensure complete and immediate needle retraction, keep fingers and hands away from the place where back end of the blood collection set meets the tubing.

Apply pressure to the venipuncture site in accordance with your facility's protocol.



Confirm that the needle is in the shielded position prior to disposal.



Discard the entire shielded blood collection set and holder into an approved sharps disposal container.

Choose smart, safe and satisfying.
Choose a smaller gauge with superior flow.

- **Reduces needlestick injuries up to 88%.**
- **Minimizes patient discomfort.**
- **Improves venipuncture.**

RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

A SUMMARY OF GOOD PRACTICE

A) USING WINGED BLOOD COLLECTION SET
(preferred method of collection)[1,2,3]

1 PREPARE BLOOD COLLECTION KIT

Confirm the patient's identity and gather all required materials before beginning the collection process.

Do not use blood culture bottles beyond their expiration date, or bottles which show signs of damage, deterioration or contamination.

It is recommended to identify the Fill-to Mark or mark the target fill level on the blood culture bottle label about 10 ml above the media level.




2 PREPARE BOTTLES FOR INOCULATION

Wash hands with soap and water then dry, or apply an alcohol hand rub or another recognized effective hand rub solution.

Remove the plastic "flip-cap" from the blood culture bottles and disinfect the septum using an appropriate and recognized effective disinfectant, such as chlorhexidine in 70% isopropyl alcohol, 70% isopropyl alcohol, or tincture of iodine in swab or applicator form. Use a fresh swab/applicator for each bottle.

Allow bottle tops to dry in order to fully disinfect.


3 PREPARE VENIPUNCTURE SITE

If skin is visibly soiled, clean with soap and water. Apply a disposable tourniquet and palpate for a vein. **Apply clean examination gloves** (sterile gloves are not necessary).

Cleanse the skin using an appropriate disinfectant, such as chlorhexidine in 70% isopropyl alcohol or tincture of iodine in swab or applicator form. **The venipuncture site is not fully clean until the disinfectant has fully evaporated.**



4 VENIPUNCTURE

Attach a winged blood collection set to a collection adapter cap*.

To prevent contaminating the puncture site, do not re-palpate the prepared vein before inserting the needle. Insert the needle into the prepared vein.



5 CULTURE BOTTLE INOCULATION

Place the adapter cap over the **aerobic bottle** and **press straight down** to pierce the septum. Hold the bottle upright, below the level of the draw site, and add up to 10 ml of blood per adult bottle and up to 4 ml per pediatric bottle.** Ensure the bottle is correctly filled to the Fill-to Mark or target fill level. Once the aerobic bottle has been inoculated, repeat the procedure for the **anaerobic bottle**.



6 OTHER BLOOD TESTS

If blood is being collected for other tests, an insert placed into the adapter cap may be required. The insert is used to guide blood collection tubes onto the needle.

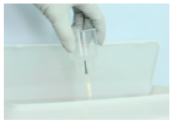
If other blood tests are requested, always collect the blood culture first.


7 FINISH THE PROCEDURE

Discard the winged collection set into a sharps container and cover the puncture site with an appropriate dressing. Remove gloves and wash hands before recording the procedure, including indication for culture, date, time, site of venipuncture, and any complications.

Ensure additional labels are placed in the space provided on the bottle label and do not cover the bottle barcodes, and that the tear-off barcode labels are not removed. If additional labels contain a barcode, they should be positioned in the same manner as the bottle barcode.

Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI.[4] If delays are expected, it is important to refer to the manufacturer's Instructions for Use for guidance.




1. Applied Phlebotomy. Dennis J. Ernst. Lippincott Williams & Wilkins, 2005.
2. Essentials Of Medical Laboratory Practice. Lieseke C, *et al.* 2012.
3. Qamruddin A, *et al.* J Clin Pathol. 2008;61:509-13.
4. Principles and procedures for Blood Cultures; Approved Guideline, CLSI document M47-A. Clinical and Laboratory Standards Institute (CLSI); Wayne, P.A. 2007.

** The use of blood collection sets without blood collection adapters is not recommended.*

*** Avoid holding the blood culture bottle in a horizontal or upside down position or drawing blood with a needle connected directly to the adaptor cap, as fill level cannot be monitored during collection and there is a possible risk of media reflux into the bloodstream.*

These recommendations illustrate the best practices for blood culture collection based on the World Health Organization recommendations (WHO guidelines on drawing blood: best practices in phlebotomy. 2010. ISBN 978 92 4 159922 1). Best practices may vary between healthcare facilities; refer to guidelines applicable in your facility.

RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

A SUMMARY OF GOOD PRACTICE

B) USING NEEDLE AND SYRINGE

Conventional needles and syringes should be replaced wherever possible with winged blood collection sets, which are safer.[1,2,3]

They should only be used if prevention measures to Accidental Blood Exposure are strictly applied*. Needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand.

1 PREPARE BLOOD COLLECTION KIT

Confirm the patient's identity and gather all required materials before beginning the collection process.

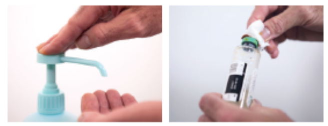
Do not use blood culture bottles beyond their expiration date, or bottles which show signs of damage, deterioration or contamination.

It is recommended to identify the Fill-to Mark or mark the target fill level on the blood culture bottle label about 10 ml above the media level.

2 PREPARE BOTTLES FOR INOCULATION

Wash hands with soap and water then dry, or apply an alcohol hand rub or another recognized effective hand rub solution.

Remove the plastic "flip-cap" from the blood culture bottles and disinfect the septum using an appropriate and recognized effective disinfectant, such as chlorhexidine in 70% isopropyl alcohol, 70% isopropyl alcohol, or tincture of iodine in swab or applicator form. Use a fresh swab/applicator for each bottle. **Allow bottle tops to dry in order to fully disinfect.**



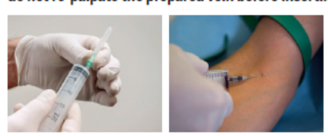
3 PREPARE VENIPUNCTURE SITE

If skin is visibly soiled, clean with soap and water. Apply a disposable tourniquet and palpate for a vein. **Apply clean examination gloves** (sterile gloves are not necessary).

Cleanse the skin using an appropriate disinfectant, such as chlorhexidine in 70% isopropyl alcohol or tincture of iodine in swab or applicator form. **The venipuncture site is not fully clean until the disinfectant has fully evaporated.**

4 VENIPUNCTURE

Attach the needle to a syringe. **To prevent contaminating the puncture site, do not re-palpate the prepared vein before inserting the needle.**



Insert the needle into the prepared vein.

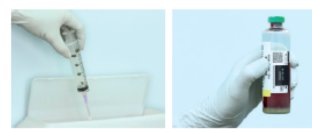
5 CULTURE BOTTLE INOCULATION

Collect the sample. Transfer the blood into the culture bottles, starting with the **anaerobic bottle**. Hold the bottle upright, and add up to 10 ml of blood per adult bottle and up to 4 ml per pediatric bottle. Ensure the bottle is correctly filled to the Fill-to Mark or target fill level. Once the anaerobic bottle has been inoculated, repeat the procedure for the **aerobic bottle**.

6 FINISH THE PROCEDURE

Discard the needle and syringe into a sharps container and cover the puncture site with an appropriate dressing. Remove gloves and wash hands before recording the procedure, including indication for culture, date, time, site of venipuncture, and any complications.

Ensure additional labels are placed in the space provided on the bottle label and do not cover the bottle barcodes, and that the tear-off barcode labels are not removed. If additional labels contain a barcode, they should be positioned in the same manner as the bottle barcode. Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI.[4] If delays are expected, it is important to refer to the manufacturer's Instructions for Use for guidance.



** Refer to recognized guidelines such as those issued by the WHO or CDC:*
http://www.who.int/injection_safety/phleb_final_screen_ready.pdf
http://www.cdc.gov/niosh/docs/2000-108/pdfs/2000-108.pdf

These recommendations illustrate the best practices for blood culture collection based on the World Health Organization recommendations (WHO guidelines on drawing blood: best practices in phlebotomy. 2010. ISBN 978 92 4 159922 1). Best practices may vary between healthcare facilities; refer to guidelines applicable in your facility.

bioMérieux S.A. • 69280 Marcy l'Étoile • France
Tel.: + 33 (0)4 78 87 20 00 • Fax: +33 (0)4 78 87 20 90
www.biomerieux.com • www.biomerieux-diagnostics.com

BLOOD BANK SPECIMEN COLLECTION

Positive identification of the patient is the most crucial step in preventing hemolytic transfusion reactions. All specimens that are not labeled properly will be rejected. This stringent policy is the standard of care for transfusion safety.

Inpatient: See Appendix A for Blood Bank Labeling and Positive Patient ID.

Outpatient:

1. Tube MUST include:
2. Patient's full first and last name
3. Patient's DOB
4. A 3*rd* unique identifier (ex: Driver's License #, SSN, MRN, Chart #, etc.)
5. Phlebotomist's first and last name
6. Date and time of draw

** If clinician thinks the patient will be admitted for blood products, call Trinity Health Blood Bank for further instructions.

URINE SPECIMEN COLLECTION

Procedure for Clean Catch Midstream Samples

Equipment needed: BD Vacutainer Complete Urine Kit
1 Castile Soap Towelette Wipe
Permanent marking pen.
Gauze pads

Step	Action
1	Ask patient to identify themselves using two patient identifiers. Ensure information matches the requisition.
2	Write the patient's full first and last name on a sterile urine specimen cup using a permanent marker, or if available, print a beaker label and apply to the collection container.
3	**Instructions For Males**: • Wash hands with soap and dry them. • Open the urine container and avoid touching the inside.
4	**Instructions For Females**: • Wash hands with soap and dry them. • Open the urine container and avoid touching the inside. • Sit on the toilet and spread genital lips with one hand. • Using the Towelette wipe provided, clean the urethral opening and the area around it working from front to back. • Wipe the area dry with the gauze pad. • Begin urinating and void the first portion into the toilet. • Fill the urine container with the mid-portion. • Void the rest of the urine into the toilet. Place the specimen in the receiving area or hand the specimen to the lab tech for processing.
5	Aliquot the urine sample for the sterile cup as follows using the transfer straw: • Urinalysis: transfer urine into a tiger top tube. • Urine Chemistries: transfer urine into a clear or white top with no additive tube. • Urine Culture: transfer urine into a gray top tube. • Urine drug screen: submit the urine in a white cap urine cup only.
6	Label the aliquot tube(s) with a Beaker test label. If a Beaker label is not available, label the tube(s) with the following using a permanent marker: • Patient's full first and last name plus: • DOB or MRN

Step	Action
	• Phlebotomist's initials • Date and time of Collection.

Procedure for Timed Urine Collections

Equipment needed: One orange 3000 mL urine container containing a preservative, if necessary

Utilize the EPIC procedure catalog if clarification is needed.

Plastic toilet hat (for females only)

Permanent marker

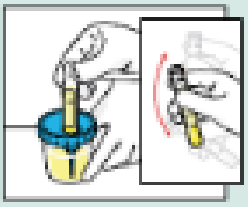
Step	Action
1	Ask patient to identify themselves using two patient identifiers. Ensure information matches requisition.
2	Label the urine container, using the Urine Collection sticker or a permanent marker, with: • Patients full first and last name • DOB or MRN • Patient's height and weight • Test(s) to be ordered.
3	Instruct the patient to place the start and stop date and times on label that is affixed to the container: COLLECTION START DATE _____ TIME_____ COLLECTION FINISH DATE_____ TIME_____
4	Provide the patient with a written instruction sheet for reference.
5	**2-hour, 6-hour or 12-hour COLLECTION:** • On day one of the urine collection, discard the first morning urine and note that date and time on the container. This is the start time for the collection. • Collect the patient's next voiding and add as soon as possible to the container. • Add all subsequent voiding's to the container until you have collected all urine samples for the requested timeframe.
6	**24-hour COLLECTION:** • On day one of the urine collection, discard the first morning urine and note that date and time on the container. This is the start time for the collection. • Collect the patient's next voiding and add as soon as possible to the container. • The last sample collected should be the first morning urine voided the following morning and note that date and time on the container. This is the finish time for the collection. For example: COLLECTION START DATE 6/02/2023 TIME 8:00am COLLECTION FINISH DATE 6/03/2023 TIME 8:00am **Instructions for females only:** • Place the collection hat on the toilet, put the seat down and urinate into the hat. • Carefully, pour the urine from the plastic hat into the large orange container.

Step	Action
7	Unless the physician indicates otherwise, instruct the patient to maintain the usual amount of liquid intake but to avoid alcoholic beverages.
8	Keep the container refrigerated during the duration of the collection.

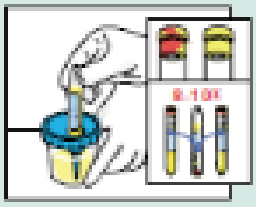
Processing Urine Samples with BD Vacutainer™ Collection Products

UA Preservative or Plain UA Tube and Culture & Sensitivity (C&S) Preservative Tube

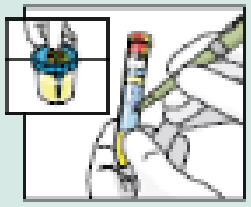
1. Peel back protective sticker to expose rubber-covered cannula.



2. • Push C&S Preservative Tube (gray top) into the integrated transfer port.
• Hold in position until flow stops.
• Remove tube.
• Shake tube vigorously.



3. • Push UA Preservative Tube (cherry red/yellow top) or plain UA Tube (yellow top) into integrated transfer port.
• Hold in position until flow stops.
• Remove tube.
• Invert UA Preservative Tube 8-10 times to mix the sample.

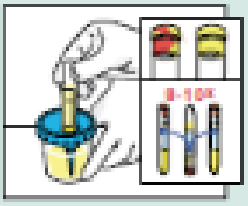


4. • Place protective sticker back over the integrated transfer port.
• Label both filled tubes with patient's name, the date/time of specimen collection and any other data required by your institution.

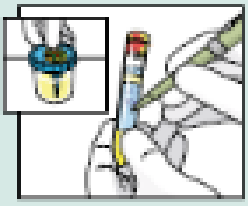
5. • Remove lid from cup and dispose in a sharps collector.
• Dispose of urine according to your facility's policy.
• Dispose of collection cup as a biohazard.

UA Preservative or Plain UA Tube Only

1. Peel back protective sticker to expose rubber-covered cannula.



2. • Push UA Preservative Tube (cherry red/yellow top) or plain UA Tube (yellow top) into integrated transfer port.
• Hold in position until flow stops.
• Remove tube.
• Invert UA Preservative Tube 8-10 times to mix the sample.

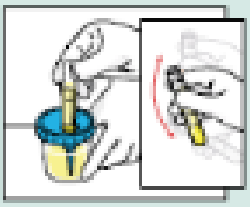


3. • Place protective sticker back over the integrated transfer port.
• Label filled tube with patient's name, the date/time of specimen collection and any other data required by your institution.

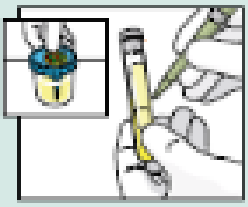
5. • Remove lid from cup and dispose in a sharps collector.
• Dispose of urine according to your facility's policy.
• Dispose of collection cup as a biohazard.

C&S Preservative Tube Only

1. Peel back protective sticker to expose rubber-covered cannula.



2. • Push C&S Preservative Tube (gray top) into the integrated transfer port.
• Hold in position until flow stops.
• Remove tube.
• Shake tube vigorously.



3. • Place protective sticker back over the integrated transfer port.
• Label filled tube with patient's name, the date/time of specimen collection and any other data required by your institution.

5. • Remove lid from cup and dispose in a sharps collector.
• Dispose of urine according to your facility's policy.
• Dispose of collection cup as a biohazard.

Urine Container Requirements by Test

Trinity Health

Check with your TH Supply Chain specialist for how to obtain the collection kits and related supplies.

Tube/Container	 **Grey Top Tube w/ Preservative**	 **Red/Yellow "Tiger" Top Tube**	 **White Cap Specimen Collection Cup**	**Method of Transfer** **Straw Transfer Device**  Straw must be discarded in sharps container.
Acceptable Urine Tests	**Urine Culture (UC) –** preservative in tube maintains specimen integrity for up to 48 hours at room temp If urine sample is **LESS THAN 3.0 mL**, use sterile white cup *(be sure to refrigerate urine specimen in this case to preserve specimen integrity).*	**Urinalysis (UA) –** preservative in tube maintains specimen integrity for up to 72 hours at room temp If urine sample is **LESS THAN 7.0mL**, use sterile white cup *(be sure to refrigerate urine specimen in this case to preserve specimen integrity).*	**Chemistry** hCG (Pregnancy) Microalbumin Albumin Calcium Chloride Creatinine Eosinophils Glucose Magnesium Osmolality Phosphorus Potassium Protein Sodium Urea Nitrogen Uric Acid *****Refrigeration required***** ***If sending urine in white cap cup ensure cap is closed tightly prior to placing in specimen bag prior to transport.	**Other Tests** Cytology (50mL min) Drug Abuse Screen GCMS (15mL min) Ethylene Glycol Immunofixation Urine (15mL min) Legionella (10 mL min) Streptococcus Pneumo Ag (0.5 mL min)

CYTOLOGY & HISTOLOGY/AP SPECIMEN COLLECTION

GYNECOLOGIC SPECIMENS

(PAP SMEARS) Specimens may be collected from the vagina, cervix, and/or endocervix.

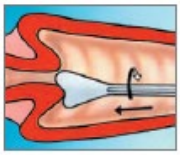
ThinPrep: Do not use lubricant. Rinse collection device (spatula, brush, or "broom") as quickly as possible. For brush: use a swirling motion while pressing the brush against the side of the collection vial. For broom: press the broom against the bottom of the vial 10 times, forcing the bristles apart, then swirl the broom vigorously in the collection vial. Discard the collection device. Tighten the ThinPrep vial cap so that the torque line on the cap passes the torque line on the vial.

High Risk HPV/Molecular Studies:
High risk HPV and/or Gonorrhea/Chlamydia detection studies may be requested on specimens collected in Thin Prep vials.

CLINICAL DATA: Must include any pertinent clinical data and/or patient history on the requisition. Include date of last menstrual period and source.

ThinPrep® Pap Test™ Quick Reference Guide

Endocervical Brush/Spatula Protocol

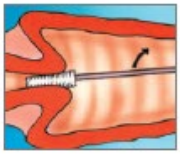


Obtain…

…an adequate sampling from the ectocervix using a plastic spatula. The use of lubricants is not recommended during Pap testing[1].

Rinse…

…the spatula as quickly as possible into the PreservCyt® Solution vial by swirling the spatula vigorously in the vial 10 times. Discard the spatula.



Obtain…

…an adequate sampling from the endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottom-most fibers are exposed. Slowly rotate ¼ or ½ turn in one direction. DO NOT OVER-ROTATE.

Rinse…

…the brush as quickly as possible in the PreservCyt Solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. Swirl the brush vigorously to further release material. Discard the brush.

Tighten…

…the cap so that the torque line on the cap passes the torque line on the vial.

Record…

…the patient's name and ID number on the vial.

…the patient information and medical history on the cytology requisition form.

Place…

…the vial and requisition in a specimen bag for transport to the laboratory.

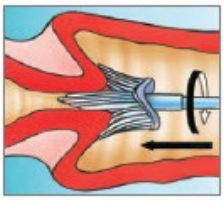
ThinPrep® Like no other.

1. Papanicolaou Technique Approved Guidelines (NCCLS Document GP15-A)

www.thinprep.com

ThinPrep® Pap Test™ Quick Reference Guide

Broom-Like Device Protocol



Obtain…

…an adequate sampling from the cervix using a broom-like device. The use of lubricants is not recommended during Pap testing[1]. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently, and rotate the broom in a clockwise direction five times.

Rinse…

…the broom as quickly as possible into the PreservCyt® Solution vial by pushing the broom into the bottom of the vial 10 times, forcing the bristles apart. As a final step, swirl the broom vigorously to further release material. Discard the collection device.

Tighten…

…the cap so that the torque line on the cap passes the torque line on the vial.

Record…

…the patient's name and ID number on the vial.

…the patient information and medical history on the cytology requisition form.

Place…

…the vial and requisition in a specimen bag for transport to the laboratory.

ThinPrep® Like no other.

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NON GYN CYTOLOGY

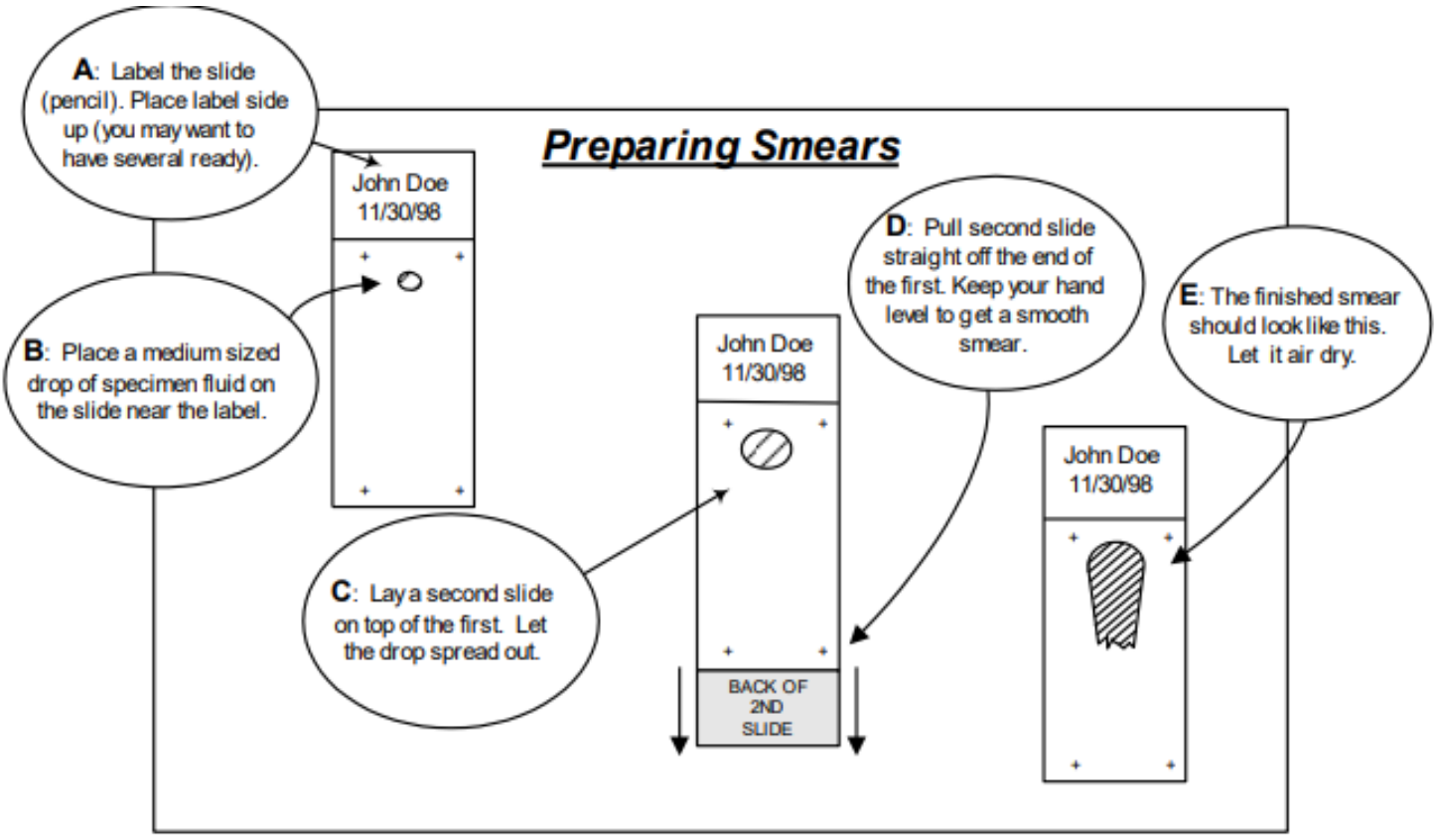
• Each specimen must be submitted in a separate, clearly labeled, leak proof container. Place lid tightly on specimen container.
• If submitting in fixative, shake gently to ensure uniform fixation of cells.
• If submitting fresh send, to laboratory immediately, refrigerate if delayed.
• Label the specimen container/slides with the patient's name, source of specimen, and one other identifier (date of birth, SSN, MRN, etc.). When labeling slides use a graphite (lead) pencil only; ink will dissolve during processing.
• Place the specimen container in a biohazard bag, insert completed requisition into outside pouch and send to laboratory.

SPECIMEN TYPE	SPECIMEN REQUIREMENTS	ADDITIONAL INFORMATION
Serous Fluids (body fluids, including pleural, pericardial, and peritoneal)	Submit a minimum of 100 cc as soon as possible. When a hematopoietic or lymphoreticular malignancy is suspected, indicate on the requisition for flow cytometry and special stains to be considered.	Refrigeration required if unable to submit immediately
Breast Cyst Fluid	Deposit freshly aspirated fluid into CytoLyt for preservation. Large specimens (greater than 20 ml) can be submitted fresh.	Fresh material for culture is submitted separately to the microbiology laboratory. If there is an associated palpable lesion, aspiration or tissue biopsy of that area should be considered (refer to the section for Fine Needle Aspiration).
Breast Nipple Secretion/Discharge	Place material into CytoLyt for transportation and preservation. Direct smears must be spray fixed	Label all prepared slides with patient name, date of birth, and source (using lead pencil or xylene resistant marker).
Synovial Fluid	Examination of synovial fluid for the presence of malignant cells is uncommon. Most commonly, synovial fluid is submitted to hematology for appropriate studies.	
Bronchial Brushings	Deposit sample immediately into CytoLyt. Use different labeled CytoLyt vials for different specimen sites.	Material for culture should be submitted separately to the microbiology laboratory. **Do not mix different location sites in the same vial.**
Bronchioloalveolar Lavage/ Bronchial Washings	All the lavage fluid should be submitted as soon as possible but may be refrigerated if necessary.	An aliquot should be sent to the Hematology Lab for total and differential cell counts. Material for culture should be submitted separately to the microbiology laboratory.

SPECIMEN TYPE	SPECIMEN REQUIREMENTS	ADDITIONAL INFORMATION
Fine Needle Aspiration	Submit material directly into container of CytoLyt. Direct smears are spray fixed then submitted. Lymph node FNAs for flow cytometry are submitted in a prefilled RPMI tube	Label all prepared slides with patient name, date of birth, and source (using lead pencil or xylene resistant marker).
Cerebrospinal Fluid	Fresh cerebrospinal fluid is recommended to be submitted as soon as possible but may be refrigerated. It is best to submit the sample from tubes 3 or 4 to avoid as much contamination with peripheral blood as possible.	A sample should also be sent to Hematology Laboratory for total cell counts since this information is useful for cytologic interpretation.
Sputum	Deep cough specimens taken early in the morning are the most suitable. Specimen should be submitted as soon as possible but may be refrigerated if necessary.	
Urine	Submit freshly voided urine as soon as possible. If there has been instrumentation, such as catheterization or bladder washing, indicate on the requisition.	Refrigeration required if unable to submit immediately
Cyst Fluids (other than breast)	Fresh cyst fluid specimens recommended or deposited into CytoLyt solution.	Must contact laboratory for immediate pickup
Esophageal/Gastric Brushings	Deposit specimen into CytoLyt solution vial.	

Trinity Health Michigan Laboratories-Visual Aid

PREPARATION OF A CYTOLOGY SMEAR



Fix Slides with Spray Fixative: Brushings, FNA, Breast Nipple Discharge/Secretions, Tzanck Smears

PROCEDURE: CYTOLOGY SMEARS	REVISED: 01/21//25 CAY	

TISSUES FOR PATHOLOGY EXAM

Introduction

Proper specimen handling requires that specimen integrity be maintained by proper preservative (where required) and that the sample identification and patient identification be clearly labeled on the specimen container and test requisition. The information in this manual will assist with that objective.

General Information

All histology specimens received by the laboratory must be accompanied by epic orders or a completed surgical pathology requisition that includes the following information:

-Patients full, legal name
-Physician (s) name
-Patients date of birth
-Patients gender
-Date and time of specimen collection
-Source of specimen (anatomical site)
-Brief clinical history-or ICD-10 code
-Time specimen was removed from body and put in formalin for breast specimens only “Cold Ischemia time”
-For off-site locations patient’s insurance or billing information
-Electronic or handwritten signature of ordering provider

Confirm correct patient sample labeling by comparing all the information listed on the specimen container with the information written on the requisition and information verbalized by the patient or responsible party (if minor or unable to do so).

The physician and nursing staff should verbally verify the source, nature, number of specimens and appropriate container/preservative prior to the delivery of the specimen to the laboratory.

Ensure that any tissue specimens have the appropriate amount of formalin to completely submerge the specimen. If there is no formalin on the specimen, ensure that it is refrigerated should there be a delay in processing (weekends and/or holidays). This ensures the specimen is properly preserved and helps prevent cellular degeneration. Testing will be done on the next routine processing day.

Labeling Specimens Containers

Specimen containers should not be pre-labeled. They should be labeled immediately after the specimen is placed into the container. Specimens must have at least two patient identifiers or they will be rejected. Specimen containers must be labeled with patient identification on the bottle not the cap. Place multiple specimens in their own individual container.

Specimen containers must be labeled with the following:

1. Patient’s complete name
2. Medical record number or other unique patient identifier (i.e., date of birth)
3. Specimen anatomic site
4. Date specimen was collected

Properly identify the surgical specimen(s) by listing what the specimen is (mass, tumor, bone, etc.) and where (anatomical site) it was obtained. Include whether it is from a Right or Left anatomical site. A review of the completeness and accuracy of the requisition in comparison with the labeling of the specimen container and patient should occur prior to leaving the procedure area.

Specimen Requirements

Most specimens should be preserved and delivered to the lab in 10% Neutral Buffered Formalin to avoid cellular degeneration (see special specimen collection list below for specimens that should not be placed in formalin). Formalin and a variety of specimen containers are available through supply chain. At minimum, the amount of formalin should be approximately a (10:1) ratio of formalin to specimen. Submerging the specimen completely in formalin is preferred.

Release of Pathology Specimens to Patients

Pathology specimens may be released to a patient after all medical testing ordered has been completed, the case has been signed out by the pathologist and the required retention period has been completed. Refer to consent “Release of Specimen/blood” policy for details and proper forms.

Special Specimen Collection

Procedure	Order Test	Specimen Handling	Additional Instructions
Fetal and Products of Conception Chromosome Studies	Chromosome analysis will be ordered by the pathologist if needed	Submit fresh in a sterile container without fixative. Indicate “chromosome analysis” on the container.	Send to the lab ASAP. Use separate containers for chromosome analysis and tissue exam.
Frozen Tissue Sections	Pathology/Tissue exam (LAB1126)	Send immediately to Histology, fresh without formalin.	Mark specimen for “Frozen section.”
Kidney Biopsy	Pathology tissue exam (LAB1126)	Follow kit instructions; use Michels Fixative and 10% Formalin.	Arkana Laboratories Renal Biopsy kit. These are not processed through the AP department.
Muscle Biopsy	Pathology tissue exam (LAB1126)	Fresh in a sterile container with saline-moistened gauze, following the Mayo kit instructions.	Submit immediately to histology. This procedure is a send out and needs to be scheduled with Histology in advance to ensure the integrity of the specimen.

Procedure	Order Test	Specimen Handling	Additional Instructions
Nerve Biopsy	Pathology tissue exam (LAB1126)	Dry sterile container. Following the Mayo kit instructions	Submit immediately to histology. This procedure is a send out and needs to be scheduled with Histology in advance to ensure the integrity of the specimen.
Immunofluorescence Skin Biopsy	N/A	Collect in Michel's fixative (green top) and send it to lab.	Michels fixative is stored in the lab.

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Submit specimen in 10% formalin or fresh sample with Cyto/Histo Request Form that details pertinent medical history. The site or source of collection must be indicated including the right or left ("R" or "L"). Please include the pre-operative diagnosis and any other pertinent information. Fresh samples should be transported to lab via hospital or commercial carrier

Trinity Health Michigan Laboratories-Visual Aid

FORMALIN FIXATION OF TISSUE SAMPLES

Add 10% formalin to achieve a 1:10 to 1:20 ratio of tissue to formalin by volume

- The container should be large enough to accommodate the specimen and filled with enough formalin to completely cover the specimen.
- . The specimen should be able to float freely in the container for adequate fixation.
- Make sure the lid is tightly closed to prevent leaks.
- ***DO NOT ADD 10% formalin*** to cytology, flow, cytogenetics, and frozen section Specimens or cultures
- Label sample, indicate source and right or left as applicable.
- 10% Formalin is hazardous. Avoid contact. Clean up spills according to procedure.

CAUTION: Contains **FORMALDEHYDE.** Toxic by inhalation and if swallowed. Irritating to the eyes, respiratory system and skin. May cause sensitization by inhalation or skin contact. Risk of serious damage to eyes. Potential cancer hazard. Repeated or prolonged exposure increases the risk.

PROCEDURE: FORMALIN OF TISSUE	REVISED: 12/29/24 CAY	

MICROBIOLOGY SPECIMEN COLLECTION

Microbiology Specimen Collection

Detailed collection instructions for common Microbiology specimens

Specimen Source	Collection Instructions	Comments
Blood culture	See above for blood culture collection instructions.	
Body Fluids (Abdominal, Ascites, Bile, Joint, Pericardial, Peritoneal, Pleural, Synovial)	1. Disinfect overlying skin with alcohol and tincture of iodine or CHG. 2. Obtain specimen via percutaneous needle aspiration or surgery. 3. Transport immediately to Lab. 4. Always submit as much fluid as possible; never submit a swab immersed in fluid.	
Bronchoalveolar lavage, Bronchial Brush or Wash or Tracheal aspirate	1. Place aspirate or washing in a sputum trap or sterile container 2. Place brush in a sterile container with 1 ml of sterile saline	
Catheter, I.V.	1. Cleanse the skin around the catheter site with alcohol or alcohol + tincture of iodine. 2. Aseptically remove and clip the 5 cm /2-inch distal tip of the catheter directly into a sterile container. 3. Transport immediately to the Laboratory to prevent drying.	Acceptable IV catheters for semiquantitative culture (Maki method): Central, CVP, Hickman, Broviac, Peripheral, Arterial, Umbilical, Hyperalimentation, Swan-Ganz.
Cerebrospinal Fluid	Physician collected specimens. Collect by Lumbar Puncture. Tube 2 is preferred for culture.	
Ear – Inner	1. Tympanocentesis reserved for complicated/recurrent/chronic persistent otitis media. 2. INTACT EAR DRUM: Clean ear canal with soap solution. Collect fluid via syringe aspiration technique. 3. RUPTURED EAR DRUM: Collect fluid on flexible-shaft swab via an auditory-speculum. 4. Place fluid/aspirate in a sterile container. 5. Transport to Laboratory.	
Ear – Outer	1. Remove any debris/crust from the ear canal with a moistened swab. 2. Obtain a sample by firmly rotating a swab in the outer canal.	For otitis externa, vigorous swabbing is required since surface swabbing may miss streptococcal cellulitis.
Eye – Conjunctiva	Sample both eyes with separate swabs (pre-moistened with sterile saline) by rolling over each conjunctiva.	
Eye – Corneal Scrapings	1. Instill 1-2 drops of local anesthetic. 2. Using a sterile spatula, scrape ulcers/lesions and inoculate directly onto media obtained from the Laboratory. (NOTE: Media should be at room temperature.)	It is recommended that swabs for conjunctival culture be taken prior to anesthetic application, whereas corneal scrapings are obtained after. If an entire cornea is collected, send in sterile saline.

Specimen Source	Collection Instructions	Comments
Feces - Clostridium difficile Toxin	Transfer 5 ml of soft liquid stool directly into a clean, dry container. (Soft stool: defined as assuming the shape of its container.)	Patients should be passing 5 stools/24hr, the consistency of which should be liquid/soft. Formed stools will not be tested.
Feces – Stool Culture/Ova and Parasite Exam/Rotavirus	1. Pass stool into a clean container. Place a piece of plastic wrap under the toilet seat to aid in collection in adults. 2. For pediatric patients, do not collect from diapers. Turning diaper "inside out" may aid in collection. 3. For test requiring multiple specimens, do not collect multiples on same day. Multiple samples should be spaced at least 1 day apart. For Ova and Parasites, transfer fresh stool to black top Total Fix Vial. This is required to preserve the specimen.	Avoid contamination with urine or water from the toilet as this may prevent recovery. For parasite examinations, patient should not have ingested barium bismuth or other antidiarrheal preparations for at least 7 days.
Feces - Rectal Swab	1. Carefully insert a swab ~1 inch beyond the anal sphincter. 2. Gently rotate the swab to sample the anal crypts.	Reserved for detecting GC, HSV, and anal carriage of S. pyogenes OR for patients unable to pass a stool specimen.
Genital - Female – Cervix	1. Visualize the cervix using a speculum without lubricant. 2. Remove mucus/secretions from the cervix with swab and discard. 3. Firmly yet gently, sample the endocervical canal with a sterile swab.	
Genital - Female – Vagina	1. Wipe away any excessive amounts of secretion or discharge. 2. Obtain secretions from the mucosal membrane of the vaginal vault with a sterile swab. 3. If a trichomonas antigen test is also requested, obtain a second swab.	For intrauterine devices (IUD's), place the entire device into a sterile container and submit at room temperature. 1-2 ml non-bacteriostatic saline may be added for moisture.
Genital - Male – Prostate	1. Cleanse the glans with soap & water. 2. Massage prostate through rectum. 3. Collect fluid on a sterile swab or in a sterile container.	
Genital - Male – Urethra	Insert a urethra-genital swab 2-4 cm into the urethral lumen, rotate while maintaining for 2 seconds.	
Genital Lesion - Male or Female	1. Using a sterile gauze pad cleanse the lesion with sterile saline and remove its surface. 2. Allow a transudate to accumulate. 3. While pressing the base of the lesion, firmly sample with a sterile swab.	If the specimen is coming to Microbiology for gonorrhea culture, use a Culture swab. If HSV is requested, place swab in viral transport media.
Hair (Dermatophytosis)	1. Using forceps collect at least 10-12 affected hairs with the base of the hair shaft remaining intact. 2. Place it in a clean tube or container.	Scalp scales, if present, should be collected along with scrapings of active borders of lesions. Note any antifungal therapy taken recently.
Lymph Node	1. Collect aseptically and avoid indigenous microbiota. 2. Do not immerse in saline or other fluid or wrap in gauze.	
Nail – Dermatophytosis	1. Wipe the nail with 70% alcohol using gauze (not cotton). 2. Clip away a generous portion of the affected area and collect material/debris from UNDER the nail. 3. Place it in a clean container.	

Specimen Source	Collection Instructions	Comments
Nasal	1. Insert a swab, premoistened with sterile saline, approx. 2 cm into the nares. 2. Rotate the swab against the nasal mucosal.	Anterior nose cultures are reserved for detecting staphylococcal and streptococcal carriers, or for nasal lesions.
Nasopharynx	1. Gently insert a Dacron swab into the posterior nasopharynx via the nose. 2. Leave the swab in place for 10 seconds. If a Molecular test is requested, place swab in Viral Transport Media (M4).	Swabs in M4 Media (Molecular): **Inpatients**: Respiratory Virus panel **Outpatients:** 4 in 1 (Sars-Cov-2, RSV, Flu A/B)
Respiratory (Lower) BAL/BBW Tracheal Aspirate	1. Place aspirate/wash into a sputum trap. If a brush is collected, place brush in a sterile container with 1ml of saline.	
Respiratory (Lower) Sputum, Expectorated	1. Collect Specimen under the DIRECT supervision of a nurse or physician. 2. Have patient rinse/gargle with water. 3. Instruct patient to cough DEEPLY to produce a lower respiratory specimen (not post-nasal fluid) into a sterile container.	
Respiratory (Lower) Sputum, Induced	1. Have patient rinse his mouth with water after brushing gums/tongue to minimize contaminating specimen with food particles, mouthwash, or oral drugs which may inhibit the growth of bacteria. 2. With the aid of a nebulizer, have the patient inhale ~25 mLs of 3-10% sterile saline. 3. Avoid sputum contamination with nebulizer reservoir water. Saprophytic mycobacteria in tap water may produce false-positive AFB culture or smear results. 4. Collect the induced sputum into a sterile container.	
Skin – Dermatophytosis	1. Cleanse the affected area with 70% alcohol. 2. Gently scrape the surface of the skin at the active margin of the lesion. Do not draw blood. 3. Place sample in clean container.	
Throat for Group A Strep	1. Using a tongue depressor, depress the tongue. 2. Vigorously sample the posterior pharynx, tonsils/pillars and areas of purulence, exudation, or ulceration. 3. Microbiology recommends using a dual swab during collection, so that one swab may be used for a "RAPID STREP SCREEN" and the second swab is available for a culture.	A screen for gonorrhea or yeast can also be ordered if suspected.
Tissue	1. Submit in a sterile container. 2. For small samples, place them in a sterile container with a small amount of saline. If submitted on gauze, please moisten gauze with sterile saline.	
Urine - Indwelling Catheter/Foley	1. Disinfect the catheter collection port with 70% alcohol. 2. Aseptically, collect 5-10 mL of urine using a needle/syringe. 3. Transfer to a sterile container or grey top boric acid tube.	Urine samples collected directly from indwelling catheter bags are NOT acceptable. For optimal specimen preservation, please place specimens in a boric acid grey top if culture is needed.
Urine - Midstream (Female)	1. Thoroughly cleanse the urethral area with soap & water. 2. Rinse with wet gauze pads/towelettes. 3. While holding the labia apart, begin voiding.	For optimal specimen preservation, please place specimens in a boric acid grey top if culture is needed.

Specimen Source	Collection Instructions	Comments
	4. After several milliliters have passed, collect a midstream portion without stopping the flow of urine.	
Urine - Midstream (Male)	1. Cleanse the glans with soap & water. 2. Rinse with wet gauze pads/towelettes. 3. While holding the foreskin retracted, begin voiding. 4. After several milliliters have passed, collect a midstream portion without stopping the flow of urine.	For optimal specimen preservation, please place specimens in a boric acid grey top if culture is needed.
Urine – Straight Catheter	1. Thoroughly cleanse the urethral area with soap & water. 2. Rinse with wet gauze pads. 3. Aseptically, insert a catheter into the bladder. 4. After allowing ~15 mL to pass, collect urine to be submitted in a sterile container.	For optimal specimen preservation, please place specimens in a boric acid grey top if culture is needed.
Wound/Abscess (Closed)	1. Remove surface exudate by wiping with sterile saline. 2. Allow surface to dry. 3. Using a needle with a Luer-tip syringe, aspirate abscess wall material. 4. Remove needle using a protective device; then recap syringe. 5. Label syringe and place in a sealable, leak-proof-specimen transport bag. 6. Alternatively, the aspirated material may be transferred to a sterile container. 7. Deliver PROMPTLY to Microbiology.	If an anaerobic culture is needed, fluid in a container or an e-swab should be collected.
Wound/Abscess (Open)	1. Remove surface exudate by wiping with sterile saline. 2. Allow surface to dry. 3. If possible, aspirate. 4. Alternatively, pass a swab(s) deep into the lesion and firmly sample the lesion's advancing edge. For mycobacterial culture, 2 swabs are preferred. 5. Return swab(s) to transport sleeve. 6. Label appropriately.	If an anaerobic culture is needed, fluid in a container, or an e-swab should be collected.

Molecular Testing		
Specimen Source	**Collection Instructions**	**Comments**
Feces-Gastrointestinal Panel	Transfer stool directly into orange top C&S preservative (Cary Blair) vial. Must be transferred at bedside/immediately after passing stool to preserve the specimen.	In an outpatient setting, our experience is limited with insurance reimbursement. Order with caution.
Misc. Sources-Chlamydia and Gonorrhea	Urine first catch (beginning stream of urine)- Use the Xpert Urine collection kit. Endocervical, vaginal, rectal, pharyngeal. Use the Xpert Swab kit for collection.	Inpatient testing only.
Misc. Sources-Trichomonas PCR	Urine-Collect using Xpert Urine Collection kit Endocervical or vaginal swab-Collect using Xpert Swab Collection	Inpatient testing only
M. tuberculosis PCR	Collect sputum specimen in sterile container.	Used to rule out clinical infectivity.
Nasal-MRSA testing	1. Insert a swab, premoistened with sterile saline, approx. 2 cm into the nares. 2. Rotate the swab against the nasal mucosal.	For patients having surgery within 4 days. Do not break swabs at score marks.

Specimen Source	Collection Instructions	Comments
Nasopharynx-Respiratory virus testing	1. Gently insert a Dacron swab into the posterior nasopharynx via the nose. 2. Leave the swab in place for 10 seconds. Place swab in Viral Transport Media (M4).	**Inpatients**: Respiratory Virus panel, 4 in 1 (Sars-Cov-2, RSV, FLU A/B), or Sars-Cov-2 only. **Outpatients:** 4 in 1 (Sars-Cov-2, RSV, Flu A/B)
Vaginal -Bacterial vaginosis, yeast, and Trichomonas.	Self-collected or physician collected vaginal swabs collected using the Xpert Swab Kit	Inpatient testing only.

Trinity Health
Lab Office: (734) 712-3141
Micro Lab: (734) 712-4235

Inpatient Collection Guide

GENITAL COLLECTION

Chlamydia and Neisseria Molecular Study: Gene Xpert Swab or Urine Collection Kit 	Genital Culture, Yeast Culture, and BV Stain: CULTURE SWAB Trichomonas Antigen Testing: CULTURE SWAB 
Trichomonas vaginalis Testing by PCR: Gene Xpert Swab or Urine Collection Kit 	Bacterial Vaginosis Testing by PCR: Gene Xpert Swab 

STOOL COLLECTION

C.difficile, Stool Culture, Fecal White Blood Cell, Calprotectin: Sterile Container 	
Stool Culture, Fecal White Blood Cell, GI Pathogen Panel: CARY BLAIR 	
Ova & Parasites, Giardia & Cryptosporidium Testing: Total Fix 	

SWAB COLLECTION

Respiratory Virus Panel, COVID 4 in 1: Viral Transport Media 	
MRSA Nasal PCR: COPAN Swab 	
Wound Culture, Throat Culture, Screening Cultures: Culture Swab 	
Anaerobic Culture: E Swab 	

MISCELLANEOUS COLLECTION

Urine Culture: Grey Top Urine 	Respiratory Culture, Tissue Culture, Bone Culture, Body Fluid Culture: Sterile Cup
Blood Culture: Aerobe and Anaerobe Bottle 	Pinworm Exam: Pinworm Paddle

Trinity Health
Lab Office: (734) 712-3141
Micro Lab: (734) 712-4235

Outpatient Collection and Transport Guide

GENITAL COLLECTION

Chlamydia and Neisseria Molecular Study for Urine and Urogenital Sources: COBAS
Room Temperature

Chlamydia and Neisseria Molecular Study for Rectal and Throat Sources: ALINITY
Refrigerated

Trichomonas vaginalis Testing by PCR: ALINITY
Refrigerated

Genital Culture, Yeast Culture, and BV Stain: CULTURE SWAB
Room Temperature

Trichomonas Antigen Testing: CULTURE SWAB
Refrigerated

Bacterial Vaginosis Testing by PCR: APTIMA
Room Temperature

STOOL COLLECTION

C. difficile, Stool culture, Fecal White Blood Cell, Calprotectin: Sterile Container
Refrigerated

Stool Culture, Fecal White Blood Cell, GI Panel: CARY BLAIR
Refrigerated
**GI Panel has limited reinbursement

Ova & Parasites, Giara & Cryptosporidium Testing: Total Fix
Room Temperature

MISCELLANEOUS COLLECTION

Urine Culture: Grey Top Tube
Refrigerated

Blood Culture: Aerobic and Anaerobic Bottles
Room Temperature

Pinworm Exam: Pinworm Paddle
Room Temperature

Fecal Occult Blood: FOB Immuno Kit
Room Temperature

SWAB COLLECTION

MRSA Nasal PCR: COPAN Swab
Room Temperature

Wound Culture, Throat Culture, Screening Cultures: Culture Swab
Room Temperature

Anaerobic Culture: E Swab
Room Temperature

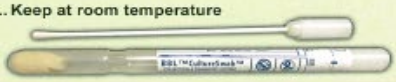
Specimen Transport Guide

Miscellaneous Microbiology

BBL CULTURETTE SWAB, AEROBIC

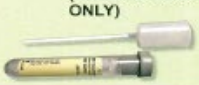
Usage..... Bacterial cultures (ie. throat, wound)

Handling .... Keep at room temperature



BORIC ACID

Usage..... Transfer Tube (Urine Cultures ONLY)



STERILE URINE CUP

Usage..... Urinalysis,

M4 MEDIA, VIRAL TRANSPORT MEDIA (RED CAP)

Usage..... Influenza A&B PCR, Adenovirus, Cytomegalovirus, Herpes I and II, Para Flu 1,2,3, Pertussis (Bordetella) by PCR. Resp. Syncytial Virus, Varicella Virus, Herpes Simplex Virus PCR, Covid / SARS

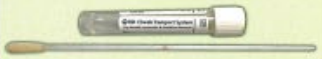
PINWORM PADDLE

Usage..... Pinworm

Handling .... Room Temp.

BD ESWAB COLLECTION & TRANSPORT SYSTEM

Usage..... Anaerobic cultures



ALINITY SWAB

Usage.....
Throat / Rectal
Chlamydia/Gonorrhea

BAC T / ALERT AEROBIC / ANAEROBIC

Usage..... Blood Cultures

Handling .... Keep at room temperature
DO NOT REFRIGERATE

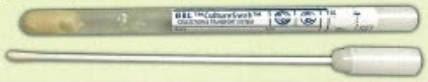
Genital Specimens

CULTURETTE SWAB, AEROBIC

Usage..... Bacterial cultures

Trichomonas Antigen *(Dedicated vaginal sample)*, Bacterial Vaginosis, Yeast, GBS, Genital Culture

Handling .... Keep at room temperature – DO NOT REFRIGERATE



COBAS PCR SWAB

Chlamydia/Gonorrhea
PCR - Females
Urine - Male or Female

URINE CUP

Usage..... Urine Chlamydia/Gonorrhoeae, Urine Trichomonas, Urine mycoplasma / Ureaplasma

APTIMA – HOLOGIC SWAB

Usage..... Mycoplasma / Ureaplasma PCR

** Use blue collection swab only*
Female: swab collection only
Male: urine only - Send plain urine cup

THIN LAYER PAP VIAL

Usage..... HPV, Pap smear (Females only), Chlamydia, Gonorrhoeae

Handling .... Room temperature or refrigerate

* Rectal HPV: Please call Lab

Note: Trichomonas if seen will be reported on Pap Smear

Stool Specimens

STOOL CUP

(May be any clean, dry container with a watertight sealable lid.)

Usage..... Stool Cultures, Fecal WBC, C. difficile should be collected in plain cup

H. pylori, Calprotectin, Fecal reducing substances, Pancreatic Elastase

PARA-PAK C&S

Usage..... Stool cultures, Fecal WBC, Gastrointestional pathogen panel

*Note: Specimen must be at or above the arrow (2/3 full) to be adequate for testing.

Stool must be collected in preservative

TOTAL – FIX

Usage..... Ova & Parasite, Giardia Antigen, Cryptosporidium Antigen

Handling .... Refrigerate or room temperature

Stool must be collected in preservative

*Note: Specimen must be at or above the arrow (2/3 full) to be adequate for testing.

IMMUNO CHEMICAL FECAL OCCULT BLOOD

Usage..... Fecal RBC's

Handling .... Store at room temperature
*Include requisition

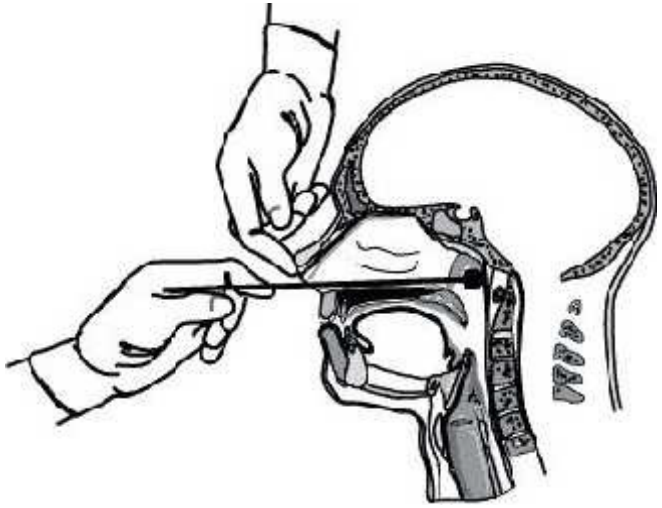
Note: Patient instructions and mailers available

Trinity Health

Trinity Health Michigan Laboratory Visual Aid

COLLECTION OF A NASOPHARYNGEAL (NP) SPECIMEN

The technique described below can be used for Rapid Influenza testing, Rapid RSV, Bordetella pertussis PCR/culture and viral culture for some agents.



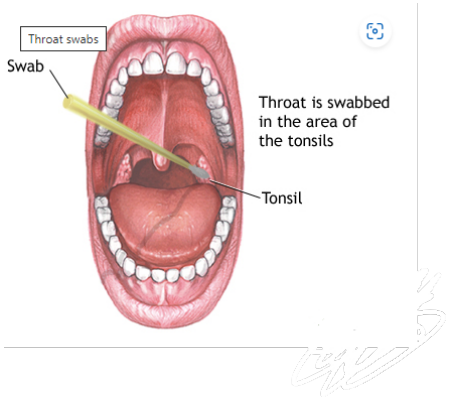
1. Immobilize the patient's head.
2. Gently insert nasopharyngeal swab into a nostril until the posterior nares is reached.
3. Leave the swab in place for up to 10 seconds. This procedure may induce coughing and tearing.
   If resistance is encountered during insertion of the swab, remove it and attempt insertion of the opposite nostril.
4. Remove the swab slowly.
5. Place in transport media. (VIRAL TRANSPORT FOR FLU, RSV,

LABORATORY PROCEDURE: NP CULTURE	CREATED BY: CAY UPDATED: 02/04/24	Trinity Health

Trinity Health Michigan Laboratory Visual Aid

COLLECTION OF A THROAT SPECIMEN

1. Shine a bright light into the oral cavity of the patient so that the swab can be guided to the posterior pharynx.
2. The patient is instructed to tilt his/her head back and breathe deeply.
3. Depress the tongue with a tongue depressor to help visualize the posterior pharynx.
4. Use a sterile Dacron swab. Extend the swab to the back of the throat between the tonsil pillars and behind the uvula.
5. Have the patient phonate a long ‘aah’ which will lift the uvula and help to prevent gagging.
6. The tonsil areas and posterior pharynx should be firmly rubbed with the swab.
7. Care should be taken not to touch the teeth, cheeks, gums, or tongue when inserting or removing the swab to minimize contamination with normal mouth flora.



LABORATORY PROCEDURE: THROAT CULTURE	CREATED BY: CAY UPDATED: 02/04/24	Trinity Health

VIRAL SPECIMEN COLLECTION		
DISEASE/SYMPTOMS	**VIRUSES**	**RECOMMENDED SPECIMEN**
Cardiac Myocarditis and Pericarditis	Coxsackie B 1-5 Echovirus	Pericardial fluid, throat swab Pericardial fluid, throat swab
Congenital and Neonatal Infections	Rubella Cytomegalovirus Herpes Simplex Virus Enterovirus Varicella-Zoster Virus	CSF, throat, urine Urine, throat, blood, tissue, CSF, throat, brain biopsy, vesicle CSF, throat, stool, brain biopsy, autopsy Vesicle, throat
Gastrointestinal/Gastroenteritis	Adenovirus Astrovirus Norovirus Rotavirus	Stool Stool
Genital Infections	Herpes Simplex Virus	Genital swab, vesicle swab, vesicle fluid
Malaise Syndrome	Cytomegalovirus Epstein-Barr Virus	Blood, urine, throat swab Serological testing only
Neurologic Aseptic Meningitis and Encephalitis	Adenovirus Arbovirus Cytomegalovirus Enterovirus Herpes Simplex Virus LCM Measles Mumps Parechovirus Varicella-Zoster Virus	CSF, brain biopsy, blood CSF, brain biopsy, blood Brain biopsy, CSF CSF, throat swab, stool, brain biopsy CSF, brain biopsy, blood Serological testing only CSF, urine CSF, urine CSF, stool
Ocular Conjunctivitis and Keratitis	Adenovirus Cytomegalovirus Enterovirus Herpes Simplex Virus Varicella-Zoster Virus	Eye swab Eye swab Eye swab Corneal or conjunctival scrapings Eye swab, corneal or conjunctival scrapings

VIRAL SPECIMEN COLLECTION		
DISEASE/SYMPTOMS	**VIRUSE**	**RECOMMENDED SPECIMEN**
Respiratory Tract Infections	Adenovirus Enterovirus human Metapneumovirus Influenza A/B Parainfluenza 1/2/3 Rhinovirus RSV	NP swab, transtracheal aspirate, throat swab NP swab, throat swab NP, throat swab, bronchial wash, lung tissue NP, throat swab, sputum NP, throat swab NP, throat swab NP swab, aspirate, or wash NP, throat swab, bronchial wash, lung tissue
Respiratory Pneumonia	Adenovirus Cytomegalovirus Herpes Simplex Virus human Metapneumovirus Influenza A/B Parainfluenza 1/2/3 RSV SAR S Varicella-Zoster Virus	Throat swab, nasopharyngeal (NP), bronchial wash, tissue Urine, throat swab, lung tissue, blood, bronchial wash Throat swab, bronchial wash, lung tissue, oral lesion, blood NP, throat swab, bronchial wash, lung tissue. Throat wash, sputum, lung tissue, NP, bronchial wash Throat swab, sputum, lung tissue, NP, bronchial wash NP, bronchial wash, lung tissue. NP, throat swab, bronchial wash, lung tissue Lung tissue, bronchial wash, skin lesions, blood
Skin /Cutaneous Exanthems and Enanthems	Enterovirus Herpes Simplex Virus HHV-6 Measles Parvovirus B19 Rubella Varicella-Zoster Virus	Vesicle swab, throat swab, stool Vesicle swab Serology/PCR Blood, throat swab Serology/PCR Throat swab, CSF, urine. Scrapings from fresh vesicle

Trinity Health Ann Arbor Microbiology Department Order List

Culture and Gram Stains

Orderable procedure	Test mnemonic	Lab code	Sources accepted	Container	Other information
Culture anaerobic	AC	LAB233	Deep wounds, tissue, body fluids, etc.	E-swabs, fluids in syringes (needle removed), tissue/bone/fluids in sterile container	An aerobic culture must also be ordered. NOT acceptable: Cervix, vaginal, placenta, mouth, skin (wounds ok), sputum, BAL, Stool, Throat, Urine (unless surgical), medical devices.
Culture blood	BC	LAB462	Blood	BacT/Alert Blood culture bottles (Aerobic and Anaerobic=1 set)	Normally 2 sets are ordered.
Culture body fluid	BFC	LAB269	Sterile body fluids. Peritoneal, pericardial, pleural, bile and synovial, etc.	Fluids in syringes (needle removed) or sterile container.	>5 ml is recommended for optimal culture sensitivity. Synovial, pericardial, and pleural fluids will always get a gram stain per protocol. Please order the test below for those sources. Other sources (like an abscess) should be ordered as a wound culture.
Culture body fluid with gram stain	BFCAD	LAB6915	Sterile body fluids. Peritoneal, pericardial, pleural, bile and synovial, etc.	Fluids in syringes (needle removed) or sterile container.	Other sources (like an abscess) should be ordered as a wound culture.
Culture bone	BCAD	LAB5010	Bone	Sterile container	
Culture bronchial, quantitative	QBBC	LAB7196	Bronchial	Bronchial brush in a tube containing 1ml of sterile saline.	
Culture IV catheter	CATHCL	LAB224	Segment of a catheter or catheter tip	Sterile container	NOT acceptable: Foley catheters
Culture CSF with gram stain	CSFC	LAB7998	Spinal fluid from lumbar puncture or shunt	Sterile container	>2ml is recommended for optimal culture sensitivity. (5ml if possible)
Culture ear	EAC	LAB942	Ear	Culture swab, e-swab	
Culture ear with gram stain	EACAD	LAB7197	Ear	Culture swab, e-swab	
Culture eye	EYC	LAB943	Eye	Culture swab, e-swab	

Orderable procedure	Test mnemonic	Lab code	Sources accepted	Container	Other information
Culture eye with gram stain	EYCAD	LAB6922	Eye	Culture swab, e-swab	
Culture fungal, blood	Fungal BC	LAB242	Blood	BacT/Alert Blood culture bottles (Aerobic and Anaerobic=1 set)	The fungal blood culture bottles incubate for 10 days. Normally 2 sets are ordered.
Culture fungus, OTHER	FNC	LAB4414	Wounds, tissue, body fluids, etc.	Sterile containers, culture swabs, e-swabs etc.	Hair, skin, and nail sources should be ordered using the test below.
Culture fungus, skin hair or nails	FC	LAB4413	Hair, skin, nails	Sterile containers containing pieces of hair, skin, or nails	
Culture genital	GCA	LAB465	Any genital source	Culture swab, e-swab	This culture does NOT come with a gram stain. If you are looking for bacterial vaginosis, see below (LAB7824). We recommend only ordering a full genital culture if our screening tests below do not cover needed organisms. “Cervix” is Epic’s default source. Please change to the correct source (e.g., vaginal) when ordering.
Culture genital with gram stain	GCAD	LAB6925	Any genital source	Culture swab, e-swab	We recommend only ordering a full genital culture if our screening tests below do not cover needed organisms. If you want bacterial vaginosis only, order LAB7824. For vaginal sources, the gram stain will be read to indicate if the patient has bacterial vaginosis.
Culture gonorrhea	GCSCR	LAB235	Any source	Culture swab, e-swab	Do not refrigerate swab
Culture group B strep	GBSSC	LAB4002	Vaginal/Rectal	Culture swab	Prenatal screening culture
Culture medical device	MEDDCU	LAB4874	Medical device	Sterile Container	
Culture MRSA	MRSA SC	LAB234	Nasal	Culture swab	For preoperative testing (surgery date greater than four days away).
Culture peritoneal fluid dialysate with gram stain and susceptibility	CFCAD	LAB7202	Dialysate fluid	Sterile container	>100cc is recommended for optimal culture sensitivity.

Orderable procedure	Test mnemonic	Lab code	Sources accepted	Container	Other information
Culture respiratory with gram stain	RCAD	LAB6931	Sputum, BAL, Tracheal aspiration, Nasal etc.	Sterile container	
Culture sterility	STC	LAB226	Water	Sterile container with water sample, or water placed in Millipore Heterotrophic plate count sampler.	20-50ml of water
Culture stool	STOC	LAB223	Feces	Sterile container, Cary Blair is also acceptable	
Culture strep A	CXSTREPA	LAB236	Throat or Rectal	Culture swab or e-swab	
Culture tissue with gram stain	TCAD	LAB7999	Tissue	Sterile container	
Culture tissue, quantitation	QTC	LAB7241	Tissue	Sterile container	
Culture urine	UCA	LAB239	Urine	Grey top boric acid.	Sterile containers are also acceptable, but discouraged, due to lack of preservative present to stabilize colony counts.
Culture urine, high sensitivity	UCHS	LAB6938	Urine	Grey top boric acid	For urologists or if the specimen was obtained surgically. Sterile containers are also acceptable, but discouraged, due to lack of preservative present to stabilize colony counts.
Culture vancomycin resistant enterococcus	VRESC	LAB238	Urine, rectal swab, fresh stool	Sterile container, culture swab, e-swab	
Culture wound	WC	LAB503	Misc. sites-please specify body location when ordering	Culture swab, e-swab	
Culture wound with gram stain	WCAD	LAB6939	Misc. sites-please specify body location when ordering	Culture swab, e-swab	
Culture yeast	YSTSC	LAB6942	Any	Culture swab, e-swab	This test is used often to screen for yeast in vaginal specimens
Fecal leukocytes	Fecal WBCs	LAB265	Stool	Sterile container, Cary Blair	
Gram stain for bacterial vaginosis, yeast	BV STAIN	LAB7824	Vaginal	Culture swab	The best test to diagnose bacterial vaginosis
Gram stain	GRAM STAIN	LAB250	Any source	Culture swab, e-swab	If a gram stain is needed, it is recommended to order one of the culture + gram stain tests above.
KOH prep, skin, hair, nails	KOHSK	LAB7594	Hair, skin, nails	Sterile container	

Antigen and Molecular Testing

Orderable procedure	Test mnemonic	Lab code	Sources accepted	Container	Other information
BV PCR	BVPCR	LAB4025	Vaginal	Xpert Swab Collection Kit	**Inpatient only.** Outpatients should order: BV LAB7824 Yeast LAB6942 Trichomonas LAB4031
Chlamydia & Gonorrhea PCR	CTGC	LAB1376	Urine, vaginal, endocervical, pharyngeal and rectal	Xpert Urine Collection Xpert Swab collection	**Inpatients Only.**
Clostridium difficile molecular study	CDTM	LAB257	Feces	Sterile container	Formed specimens will be rejected
Cryptococcal antigen, CSF	CRYPTO CSF	LAB927	Spinal fluid	Sterile container	
Cryptococcal antigen	CRYPTO AG	LAB779	Serum	SST tube or serum in a sterile container	
Encephalitis pathogens Molecular Study	ENPCR	LAB5068	Spinal fluid	Sterile container	Specimen must NOT be spun prior to testing
Gastrointestinal Pathogens Molecular Study	GIPCR	LAB1901	Feces	Cary Blair collected at bedside	Tests for 19 gastrointestinal pathogens, including Salmonella, Shigella, and Campylobacter.
Influenza A & B Screen	INFLU	LAB7609	Nasal, Nasopharyngeal	M4 media or Puritan Sterile Foam Tipped Applicator	
MRSA Nasal PCR	MRSAN	LAB7607	Nasal	Copan Dual Swab with breakable points (Do not break the swabs).	For patients that are having surgery (cardiac, neurological, orthopedic, and spinal) in the next four days. This is also orderable to assess for MRSA related pneumonia to discontinue vancomycin therapy and may be ordered by pharmacists. This should only be ordered by Infectious Diseases or physician assistants involved with the surgical patient. Specimens from patients ≤21 years of age will be rejected.
Mycobacterium tuberculosis complex, molecular study, respiratory	TB PCR	LAB4602	Sputum	Sterile Container	Sources other than sputum are sent out.
Rapid strep screen with reflex culture	RSSC	LAB885	Throat	Culture swab	Negative results will reflex to a throat culture.
Respiratory virus panel molecular study	RVP	LAB8132	Nasopharyngeal	Viral Transport (M4) media	**Inpatients only.** Tests for 19 respiratory pathogens including covid, RSV, and flu A/B Outpatients: Order LAB8198

Orderable procedure	Test mnemonic	Lab code	Sources accepted	Container	Other information
Sars-Cov2 Antigen	SARS-COV-2 A	LAB8929	Nasal	Sterile swabs from kit	Inpatients only. Specimens should be transported to the lab promptly (within 1 hour)
Sars-Cov2 PCR-4 in 1	COVRSVAFBPCR	LAB8198	Nasopharyngeal	Viral Transport (M4) media	Sars-Cov-2, Influenza A/B, and RSV
Sars-Cov2 PCR-Single	SARS-COV	Lab7888	Nasopharyngeal	Viral Transport (m4) media	Sars-Cov-2 only
Sars-Cov2 Screen	COVIDSCRN	Lab7901	Nasal	Puritan Sterile Foam Tipped Applicator swab.	
Trichomonas Antigen	TRICHAG	LAB4031	Vaginal	Culture swab	Collect an extra swab if you are ordering cultures.
Trichomonas PCR	TRIVA	LAB921	Vaginal, Urine	Xpert Swab Collection Xpert Urine Collection	

Miscellaneous Procedures

Orderable procedure	Test mnemonic	Test lab code	Sources accepted	Container	Other information
Arthropod identification	ARTHID	LAB4174	Tick	Sterile Container	Deer ticks (Ixodes species) can be sent out for Lyme disease testing (LAB4216) if requested.
Autoclave check	AUTCLV	LAB9035		Biological indicator vial	
Pinworm prep	PINWORM	LAB248	Anus	Pinworm paddle or clear cellulose tape.	

Instructions for common patients self-collected samples can be found in APPENDIX B.
Patient Instructions for self-collected samples.

4. SPECIMEN PROCESSING AND TRANSPORT

Centrifugation:
1. Serum tubes must be placed in an upright vertical position and allowed to clot for a minimum of 30 minutes before centrifuging. After the specimen has been allowed to fully clot, the tube is to be centrifuged within 1 hour of collection and no longer than 2 hours after collection. ** Failure to separate red cells from serum or plasma within 2 hours of collection, may lead to inaccurate results** Note: Patients on anticoagulant therapy may need longer time to clot.

2. Centrifugation: All serum tubes must be perfectly balanced, and tubes spun within the appropriate speed and time.

3.Observe each tube after centrifugation. Verify that the gel is completely separating cells from serum. If complete separation is not visible, DO NOT RECENTRIFUGE.

4.If aliquoting before transport is required, transfer serum or plasma to an aliquot tube using a pipette leaving a small amount on top of the gel or packed cells. Label aliquot with same information as primary tube.

Light Sensitive Specimens: Pour plasma/serum into a dark aliquot tube to protect the specimen from any light source to ensure specimen integrity. If a dark aliquot tube is not available, wrap aluminum foil or paper towel around the tube (not the stopper) tightly.

To minimize exposure to bloodborne pathogens in transport of specimens, Standard Precautions must be used. ALL blood and other potentially infectious materials are treated as if they are known to be infectious with HIV or hepatitis and other bloodborne pathogens.

All specimens must be transported in a sealed biohazard bag. Please refer to the Laboratory Test Directory for specific storage requirements (room temp (ambient), refrigeration, or frozen) for the testing of the patient sample.

Room Temperature Specimens: If your specimen does not have a specific storage requirement and will be stored at room temp before transport, please place in a sealed orange/red biohazard labeled specimen bag. Note: Do not store tubes in direct contact of a heat source such as direct sunlight, top of refrigerator, heating/air vents, etc.

Refrigerated Samples: If your specimen requires refrigerated temperatures during transport, package the specimen in a biohazard b then place the specimen in your refrigerator until transport.

Frozen Samples: If your test requires the specimen to be frozen after processing, the specimen must be centrifuged, and serum/plasma must be transferred to an aliquot tube by pipette without disturbing gel or packed cells. Following labeling requirements for all aliquots.

Temperature Definitions: Room temperature: 15° to 30° C Refrigerated:2° to 8° C Frozen: -20° to

STAT Samples: If your specimen has a “STAT” priority, please call your Courier for pickup. Place the sample in a biohazard labeled specimen bag. The expected turnaround time for STAT outpatient samples is 4 hours and for inpatient samples 30-60 minutes.

Other Requirements:
●Remove all needles and sharps from all specimens before transporting.

●All specimens must be transported in sealed biohazard, leak-proof, puncture resistant container tightly closed before transportation. Please place specimens in the Ziploc portion of the specimen bag. The completed requisition is to be placed in the outside pocket.

TRANSPORT OUTPATIENT Courier Service
Trinity Health Michigan Laboratories provide courier service for routine and stat pick-up service to physician offices and clinics. Contact your local Trinity laboratory for more information. A lock box can be provided for after-hour pick-ups.

TRANSPORT INPATIENT Pneumatic Tube
In-house, many specimens can be transported to the Laboratory via the pneumatic tube system. When transporting specimens via the tube system, lids must be tightened, and all specimens must be tightly sealed in a biohazard specimen bag to prevent leakage and contamination of the tube system. Large volume samples, specimens which are irreplaceable (high-risk) or those where specimen integrity will be compromised cannot be transported in the tube system. Refer to your site’s pneumatic tube policy for more detail.

TEST SUPPLIES

Inpatient: Within the hospital, supplies for laboratory testing are obtained through the Trinity Supply Chain. Some specialized supplies may be obtained directly from the Laboratory.

Outpatients: The lab will supply all forms; blood collection tubes and all materials related to specimen collection. See supply order form in APPENDIX B. Supply Requisition

5. RESULT REPORTING

Reporting laboratory results is a crucial part of laboratory management, as it affects the quality of patient care, clinical decision making, and public health. However, reporting results can also pose various challenges, such as ensuring accuracy, timeliness, confidentiality, and compliance with regulations and standards.

Turnaround Times

Laboratory Test Turnaround Times

At Trinity Health, we are committed to providing timely and accurate laboratory test results to support patient care. Our laboratory test turnaround times (TAT) are established in accordance with the College of American Pathologists (CAP) standards to ensure high-quality service and patient satisfaction. Many routine test results are available within the same business day. However, not every test is performed every day.

TEST TYPE	TURNAROUND TIME
Inpatient Stat tests	30-60 minutes
Routine tests	1 Day
Microbiology tests	1-6 Days
Cytology and Pathology	1-7 Days
Outpatient Stat tests	4 Hours
Reference Lab tests	Variable

See the Test Directory for TATs on specific tests. The Laboratory attempts to maintain the shortest turnaround times possible and constantly tracks testing to ensure compliance. However, unforeseen events, such as instrument failures, may delay or interfere with testing. In such cases, the Laboratory will notify caregivers and make every effort to rectify the situation as soon as possible

Critical and Alert Results

In collaboration with medical staff, Trinity Clinical Labs have established a list of critical results that are felt to be potentially life threatening. Test results meeting these criteria will be immediately phoned to the ordering physician's office (outpatients) or the nursing unit (inpatients or physician). In addition, a list of alert results that, while not immediately life threatening, pose significant/public risk will be communicated to providers. A list of critical and alert values follows.

Reporting to Trinity Providers

Laboratory results are reported electronically to the EPIC electronic health record as soon as they are completed. Outpatient providers will be alerted to new results by an inbox message.
In the event of a prolonged computer downtime (>2-3 hours), hardcopy reports will be prepared and delivered to the nursing stations and critical and stat results will be telephoned. During downtime, please refrain from calling the laboratory unless there is an urgent need, as these interruptions can further delay the ability to report results.

Reporting to non-Trinity Providers

If you are a provider at an institution that utilizes an Epic electronic medical record system, you may be able to access your patient's Trinity records through Epic's "Care Everywhere" functionality. Please contact your internal Epic support team for additional information.
If computer access is not available, a hard copy report will be printed and sent via U.S. Mail to the address on record.

Reporting to Patients

Patients that would like direct access to the laboratory results are encouraged to sign up for MyChart access.

Reference Laboratory Results

Many reference lab results directly interface into the EPIC system. For those reference laboratory results that do not automatically report in EPIC, results will be scanned in or manually entered in EPIC.

Public Health Reporting

Certain state and federal regulations require Trinity Laboratories to report specific laboratory results to governmental agencies. These are communicable diseases or conditions that have significant public health contact. Contact your Trinity Laboratory for a list of Michigan and Federal reportable results.

Reference Ranges

Current reference ranges for assays can be found in the Laboratory Test Directory. These are also reported in EPIC and hard copy reports.

LABORATORY CRITICAL RESULTS

				Red alerts			Orange Alerts	
Epic Proc Name	**Epic Test No**	**AGE RANGE/SEX**	**Units of Measure**	**LOW**	**HIGH**	**Special Instructions**	**LOW**	**HIGH**
Acetaminophen	LAB43	All	mcg/mL					101
Calcium, corrected for albumin	LAB7505	All	mg/dL	6.4	13			
Amikacin - Peak	AMI	All	mcg/mL	35				
Amikacin - Trough		All	mcg/mL		11			
Ammonia	LAB47	Newborn (NB) to 15 years	umol/L		160			
Arterial Blood Gas - pH	LAB76	NB to 1 day		7.05				
HCG, quantitative	LAB143	Female	mIU/mL		200000			
Bilirubin-Total	LAB50	NB to 3 days	mg/dL		15			
		3 days to 18yrs	mg/dL		18			
Blasts		NB to 15 yrs	K/mcL		0.10			0.10
		15 yrs to adult	K/mcL					0.10
Blood Urea Nitrogen	LAB140	NB to 28 days	mg/dL					115
		28 days to adult						115
Calcium	LAB53	NB to 18 yrs	mg/dL	6	12		6.6	13
		18 yrs to adult					6.6	13
Calcium, Ionized	LAB54	All	mg/dL				3	6.5
Calcium, Ionized, post-filter	LAB700	All	mg/dL				0.9	
Carbamezapine	LAB21	All	mcg/mL					15.1
Carbamezapine-free	?	All	mcg/mL					6
CO2, total	LAB55	All	mmol/L	10	40			
CK	LAB62	All	Unit/L					2,000
Creatinine	LAB383	NB to 15 yrs	mg/dL		2.5			10
		15 yrs to adult						10
Glucose, CSF	LAB185	18 yrs to adult	mg/dL	40				
Protein, CSF	LAB195	18 yrs to adult	mg/dL		300			
Digoxin	LAB23	All	ng/mL					3
Ethylene Glycol		All	mg/dL		20	Volatiles Screen (LAB4826)		
Fibrinogen	LAB314	All	mg/dL	100			101-150	

				Red alerts			Orange Alerts	
Epic Proc Name	**Epic Test No**	**AGE RANGE/SEX**	**Units of Measure**	**LOW**	**HIGH**	**Special Instructions**	**LOW**	**HIGH**
Gentamycin level peak	LAB28	NB to 18 yrs	mcg/L		12.1			
Gentamycin level trough	LAB26	All	mcg/L		3.0			
Glucose, Random	LAB82	NB to 1 mo	mg/dL	40	250			
		1 mo to 18 yrs		50	250			
		18 yrs to adult		53	451			
Glucose, Fasting	LAB81	NB to 1 mo	mg/dL	40	250			
		1 mo to 18 yrs		50	250			
		18 yrs to adult		53	451			
Glucose 1 HR gestational	LAB4878	All	mg/dL	53	451	Glucose tolerance, 2 hours (LAB169) Glucose tolerance, 3 hours (LAB164)		
Glucose 1.0 HR		NB to 1 mo	mg/dL	40	250			
		1 mo to 18 yrs		40	250			
		18 yrs to adult		53	451			
Glucose 2.0 HR		NB to 1 mo	mg/dL	40	250			
		1 mo to 18 yrs		40	250			
		18 yrs to adult		53	451			
Glucose 3.0 HR		NB to 1 mo	mg/dL	40	250			
		1 mo to 18 yrs		40	250			
		18 yrs to adult		53	451			
Aspartate aminotransferase (SGOT)	LAB131	NB to 15 yrs	Unit/L		1000			
Alanine aminotransferase (SGPT)	LAB132	NB to 15 yrs	Unit/L		1000			
Hemoglobin	LAB291	All	g/dL	6.5		Complete Blood Count (LAB294)		
				7.5		If <= 7.5 and hgb drops by 2g/dL or more, will flag as critical		
						6.6-7.5 Outpatients only	7.5	
Prothrombin time with INR	LAB320	All			4.5			
Kleihauer-Betke	LAB762	All						2.0%F Cells
Lactic Acid	LAB730	All	mEq/L		4.0			
Lithium	LAB29	All	mEq/L		1.6			
Magnesium	LAB103	All	mg/dL	0.9	5.1			

Magnesium Maternal	?		mg/dL	1	8.1			
Malaria	LAB883	All		positive		Blood parasite smear (LAB883)		

				Red alerts			Orange Alerts	
Epic Proc Name	**Epic Test No**	**AGE RANGE/SEX**	**Units of Measure**	**LOW**	**HIGH**	**Special Instructions**	**LOW**	**HIGH**
Osmolality	LAB107	All	mOsm/K				250	300
Phenobarbital	LAB30	18 yrs to adult	mcg/mL		60			
Phenytoin	LAB31	18 yrs to adult	mcg/mL		30			
Phenytoin-free	PHENYF	All	mcg/mL					3
Phosphorus	LAB113	NB to 3 mos	mg/dL	2.0				
		3 mos to adult		1.0				
Platelet Count	LAB301	NB to 15 yrs	K/mcL	50	1,500			
		15 yrs to adult		10			30	1500
PMNs	PMN #	15 yrs to adult	K/mcL				0.3	30.0
Potassium	LAB114	NB to 18 yrs	mEq/L	2.5	7.0			
		18 yrs to adult		2.9	6.3			
PTT	LAB325	NB to 15 yrs			150			
		15 yrs to adult	sec		110			
Salicylates	LAB34	All	mg/dL		31			
Sodium	LAB122	NB to 15 yrs	mEq/L	125	155		125	
		15 yrs to adult		120	161			
Tobramycin level, trough	LAB38	All	mcg/mL		3			
Tobramycin level, peak	LAB36	NB to 18 yrs	Mcg/L		12.1			
Troponin I – High Sensitivity	LAB7518	Male	ng/L		101			
		Female	ng/L		101			
Valproic Acid	LAB24	All	mcg/mL					175
Vancomycin-random	LAB40		mcg/mL		50			
Vancomycin, trough	LAB39	NB to 18 yrs	mcg/mL		16			
		18 yrs to adult			30			
Venous HCO3		All	mMol/L	10	40	Venous blood gas (LAB79)		
Venous pCO2		All	mmHG		60			
pH, Venous		All		7.2	7.6			

Microbiology **Infection control (inpatient)	**Adult** (≥ 15 years old)		**Pediatric** (<15 years old)	
Cultures or Smears	**Red alerts**	**Orange alerts**	**Red alerts**	**Orange alerts**
AFB smear, culture, or TB PCR (POS)**		X	X	
Blood Culture (POS)	X		X	
Body Fluid smear or culture (POS)		X	X	
CSF smear or culture (POS)	X		X	
Group A Strep isolated (all sources)		X		X
Stool culture (see procedure)		X		X
Urine culture (<3 months)			X	
Urine culture (3 months-2 years)				X
MDRO (inpatients only)		X		X
Antigens				
Cryptococcal Antigen (POS)		X	X	
Group A Strep Antigen (POS)		X		X
Shiga Toxin (POS)**		X		X
C.difficile toxin (POS)		X		X
PCR Testing				
Blood culture PCR (ALL)		X		X
GI Panel PCR (POS targets below)				
Campylobacter**		X		X
Cryptosporidium species**		X		X
Cyclospora**		X		X
Giardia**		X		X
Salmonella **		X		X
Shiga toxin producing EC/E.coli 0157**		X		X
Shigella**		X		X
Vibrio**		X		X
Yersinia**		X		X
ME Panel targets (ALL POS)	X		X	
Respiratory Panel (POS targets below)				
Mycoplasma pneumoniae		X		X
Chlamydia pneumoniae		X		X
Bordetella parapertussis		X		X

Microbiology ****Infection control (inpatient)	**Adult** (≥ 15 years old)		**Pediatric** (<15 years old)	
Cultures or Smears	**Red alerts**	**Orange alerts**	**Red alerts**	**Orange alerts**
Bordetella Pertussis **		**X**		**X**
TB PCR in house (POS target below): Mycobacterium tuberculosis**		**X**	**X**	

Trinity Health Michigan Laboratory Visual Aid

READ BACK OF CRITICAL LABORATORY VALUES

Read back of critical values is a Joint Commission requirement as one of their National Patient Safety Goals:

"Improve the effectiveness of communication among caregivers."

Organizations are required to "read back" verbal or telephone orders and critical test results to ensure accuracy.

See the Critical Laboratory Results policy for complete details.

FOR ALL CRITICAL LABORATORY RESULTS:

Laboratory Technologist will provide:	RN or Licensed Caregiver will read back:
➢ Patient Name, First and Last ➢ Date of Birth ➢ Test Name and Critical Lab Result ➢ Technologist full name ➢ Technologists must document the read back and full name & title of the licensed care giver receiving the critical lab value in the Laboratory Information System within 15 minutes.	➢ Their full name and title ➢ Patient Name, First and Last ➢ Date of Birth ➢ Test Name and Critical Lab Result ➢ Document the critical lab result in the EMR* or approved form ➢ Notify the physician within 45 minutes of receiving the critical lab value.

College of American Pathologists – Advancing Excellence

The Joint Commission – National Quality Approval

National Patient Safety Goals

*Electronic Medical Record

LABORATORY: ALL PROCEDURE: ALL	CREATED: C. Yonke REVISED: 02/01/2024	Trinity Health

SPECIMEN ACCEPTANCE AND REJECTION

The intent of the laboratory is to provide the most accurate and reliable test results possible. This depends on proper specimen collection, handling, and transport. The laboratory makes every effort to provide a timely and accurate test result. If a specimen is unsatisfactory for testing, the laboratory will contact the physician's office or floor to follow up on the following issues.

- Test requested - No specimen received.
- Misspelled name, or unable to read.
- Clotted specimen
- QNS (insufficient specimen)
- Hemolyzed specimen
- Incorrect specimen container or collection tube
- Specimen improperly collected.
- Specimen not transported properly.
- Stability exceeded.
- The specimen received without an order.
- No diagnosis code given.

Please note that any specimen submitted in unsanitary condition is dangerous to laboratory personnel and may not be accepted for testing. Be sure to follow the specimen guidelines for handling of specimens.

UNLABELED AND INCOMPLETELY LABELED SPECIMENS

Occasionally, specimens are delivered to the laboratory without a complete patient ID, with incorrect patient identification or without any patient identification. In the event that the specimen(s) are incorrectly submitted the following procedures will be used.

Incompletely Labeled Specimens

Inpatient: Specimen must be recollected. In rare instances when the specimen cannot be recollected the physician must sign a consent form for the labeling corrections.

Outpatient: Specimens should be recollected.
For Irretrievable specimens. The office is contacted and a consent form for the labeling must be completed.

Unlabeled Specimens

Unlabeled or specimens labeled with wrong patient information must be redrawn.
For irreplaceable specimens, the physician must sign off on the specimen identification and labeling correction.

Blood bank specimens MUST ALWAYS BE RECOLLECTED

Detailed information for tests performed at Michigan Trinity Laboratories can be found at the link below. The Laboratory Test Directory is a complete, up-to-date test menu, with relevant test information, specimen collection requirements, storage, and transport guidelines.

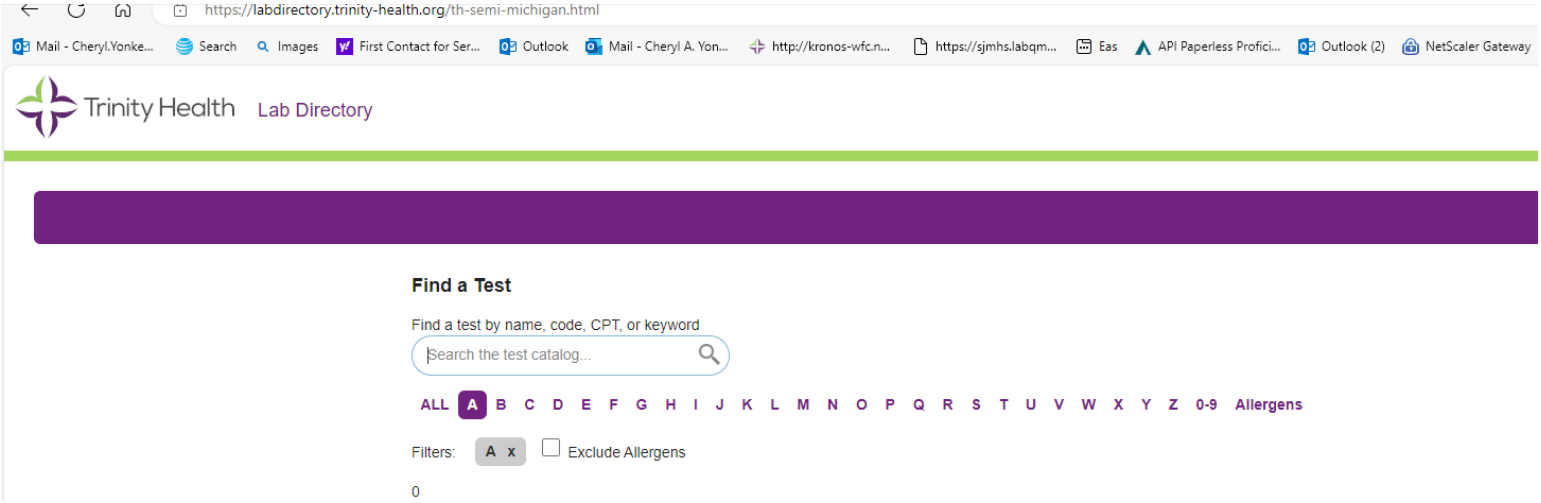
Searches can be performed by test name, code, CPT, or keyword. or select a letter to view a list of test names that start with that letter.

6. TEST DIRECTORY

Epic/Beaker users should use the Epic Procedure Catalog to obtain detailed test information, for those without access to Epic/Beaker, a list of Laboratory Tests is available at the address below. It provides a searchable table of all tests arranged in alphabetical order according to their most common name. In addition, some tests are also listed by their most commonly known synonyms. Test order name, collection container, storage for transport, CPT, test methodology and other information are provided.

For convenience in ordering, some test panels are available. Refer to the test requisition or contact your local laboratory for orderable test panels.

https://labdirectory.trinity-health.org



Specialized testing may be sent to a reference laboratory. Reference laboratories currently utilized by Trinity Health Michigan Laboratories include:

- Warde Medical Laboratories
- Quest Diagnostics
- ARUP Laboratories
- MAYO Clinical Laboratories
- LabCorp
- Michigan Department of Public Health and Human Services
- University of Michigan Laboratories

APPENDIX A
INPATIENT SPECIFIC INFORMATION

PPID-POSITIVE PATIENT IDENTIFICATION IN EPIC

1. Scan the patent hospital ID wristband

2. Tests that need to be collected will be in Rover. Draw your specimens.

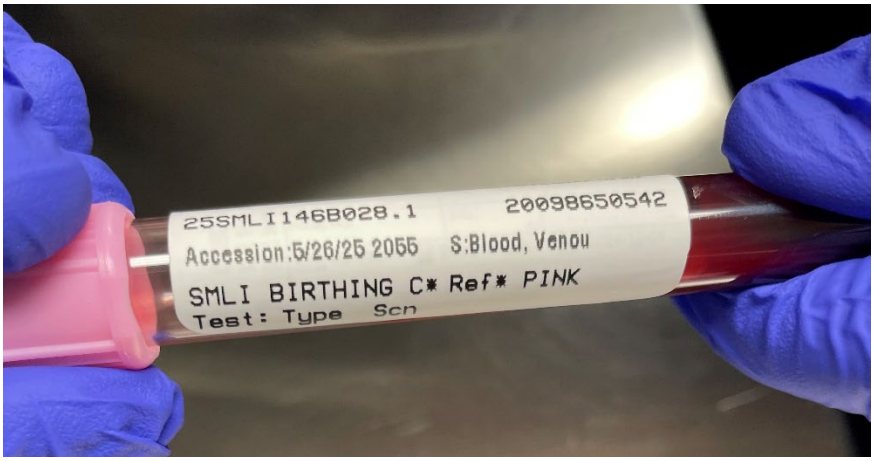
3.Scan the patient's hospital ID wristband again. Labels will print.

4. Label your specimens

5. Scan all labelled specimens. This step documents the collection date and time and collector name in Epic.

Blood Bank PPID
Positive Patient Identification

Blood Bank Specimens are labelled with your Laboratory Beaker Label.
Collection must be done at Bedside.
Specimens must be in “Collected “status when received in the laboratory or it will be **rejected** as PPID has not been followed.
Specimens with Overrides will be **rejected** as PPID has not been followed.



Blood Bank Downtime

- **Blue Armband MUST be used during Downtime.**
- Label the Blood Bank Armband with a demographic label and seal.
- Blood bank tube should be labelled with demographic label, B4 label from blue armband, date/time of draw with first initial/ last name of nurse.
- Downtime form should accompany the specimen.

APPENDIX B
OUTPATIENT-SPECIFIC INFORMATION

ICD-10 CODES

Due to requirements of third-party payers such as Medicare and Blue Cross/Blue Shield, physicians must include the sign, symptom, or if known, the diagnosis that prompted the order for laboratory outpatient testing. When the actual numeric code is provided, there is less chance for transcription and coding errors. Diagnosis information must be submitted for all tests ordered as documentation of the medical necessity of the service.

ICD-10 DIAGNOSIS CODING FOR SCREENING TESTS

The diagnosis code placed on the claim should reflect the reason for the test. If the intent of the test is for screening purposes, use the appropriate V code in the ICD-10-CM coding system, regardless of the finding. For example, when a screening laboratory test gives in abnormal finding, the test should be assigned the ICD-10-CM diagnosis for “why” the test was ordered, not the diagnosis indicated by the finding.

STANDING ORDERS

Standing orders are effective for six months. To meet compliance regulations, all orders are required to have:

1. Date (include expiration date)
2. Physician signature
3. Diagnosis or ICD-10 code

A written signed and dated standing order will expire after 6 months; the laboratory will be unable to provide services with an expired date. If a standing order does not meet the medical necessity criteria for the diagnosis provided, then appropriate ABN procedures must be followed.

Your cooperation and compliance with this regulation is appreciated.

ADVANCED BENEFICIARY NOTICE (ABN)

An ABN is a written notification required by Medicare. The form should be utilized before services are furnished, as Medicare is likely to deny payment. ABN’s allow beneficiaries to make informed consumer decisions about receiving lab tests which they may have to pay out of pocket, and to be more active participants in their own health care treatment decisions. If it is expected that payment for laboratory tests (listed on ABN) will be denied by Medicare, you should advise the beneficiary that he/she will be personally and fully responsible for payment. An ABN should be used every time it is determined Medicare will deny payment. When using an ABN please indicate the test(s) that were ordered. An explanation should be given to the patient that Medicare may not pay. The patient should review the form select an option and

then sign the form. One copy should be sent to the laboratory (attached to the request form), and the patient retains the other.

Trinity Health

TRINITY HEALTH MICHIGAN CLINICAL LABORATORIES
ANN ARBOR, BRIGHTON, CHELSEA, LIVINGSTON, LIVONIA, OAKLAND
PHONE: 1-800-528-8765
https://labdirectory.trinity-health.org/th-semi-lab

Trinity Health 0000000 OALAB2055 3/25

Distance from top of form to bottom of label = 1.25"
Distance from left side of form to left side of label = 4.5"
(On continuous forms this distance includes the stub.)
4 slits (3 vert.; 1 horiz) creating 8 labels (w=1.078125 h=0.53125)
Label doc id# 101670741 (all label manuf. represented on label proof only)

Label Width = 4.3125"
Label Height = 1.0625"

PATIENT INFORMATION

NAME (LAST, FIRST):

STREET ADDRESS:

CITY: STATE: ZIP:

___ MALE ___ FEMALE ___ DATE OF BIRTH: (MM/DD/YYYY): PHONE: ( )

PRIMARY INSURANCE:

POLICY NUMBER:

ENROLLEE ID:

GROUP NUMBER:

SUBSCRIBER/GUARDIAN NAME (If patient is a minor - LAST, FIRST NAME & DOB of SUBSCRIBER):

MEDICARE/MEDICAID NUMBER: circle one ___SUBSCRIBER ___SPOUSE ___DEPENDENT

ICD-10 CODES (REQUIRED)

ACCOUNT / PROVIDER:

PROVIDER SIGNATURE: DATE:

COPY TO: (PROVIDER FIRST NAME, LAST NAME, ADDRESS, PHONE OR FAX NUMBER REQUIRED)

SPECIMEN COLLECTED ON:
DATE:
TIME:
COLLECTED:
VERIFIED BY:

___ STAT RESULTS
___ CALL RESULTS
___ FAX RESULTS
( )
( )

MEDICARE / MEDICAID PATIENTS: Medicare / Medicaid will pay for certain tests only if a "Medicare / Medicaid payable" diagnosis code is provided by the physician. If a payable diagnosis is not provided, the patient will be asked to sign an Advanced Beneficiary Notice (ABN) allowing TRINITY HEALTH to bill the patient.

The tests shaded in green below are the only tests that will be available to order in the event of a prolonged laboratory system downtime.

PANELS / PROFILES (CHECK BOX)	
LAB15	Basic Metabolic Panel
LAB17	Comprehensive Metabolic Panel
LAB16	Electrolyte Panel
LAB20	Hepatic Function Panel
****	Hepatitis Acute Panel
LAB18	Lipid Panel (No Reflex)
LAB5162	Lipid Panel with Reflex to Direct LDL
LAB19	Renal Function Panel
HEMATOLOGY (CHECK BOX)	
LAB293	CBC with Differential
LAB294	CBC (No Differential)
LAB322	Erythrocyte Sedimentation Rate, (ESR)
LAB7748	Pathologist Evaluation
COAGULATION (CHECK BOX)	
LAB320	PT/INR
LAB325	PTT
LAB314	Fibrinogen
BLOOD BANK (CHECK BOX)	
LAB276	Type and Screen
LAB695	ABO Rh (Blood type)
LAB4057	Antepartum RHIG Evaluation
LAB278	Antibody Screen
LAB275	Antibody Titer
LAB274	DAT (Direct Antiglobulin Test)
LAB1284	RBC Antigen Typing
Transfusion Date:	
# of units:	
Transfusion Location:	
OBSTETRICAL TESTS (CHECK BOX)	
LAB143	HCG, Beta Quantitative
LAB437	HCG Urine Qualitative
LAB692	Alpha Fetoprotein Maternal
LAB500	Quad Screen
CHEMISTRY/IMMUNOLOGY (CHECK BOX)	
LAB45	Albumin
LAB112	Alkaline Phosphatase
LAB559	Alpha Fetoprotein Tumor Marker
LAB132	ALT
LAB131	AST
LAB48	Amylase
LAB4146	ANA IFA with Reflex to 7 Connective Tissue Disease Antibodies
LAB4147	ANA w/Titer and Pattern
LAB648	Anti-DNA Antibody, Double Stranded
LAB52	Bilirubin, Direct
LAB50	Bilirubin, Total

CHEMISTRY / IMMUNOLOGY (CHECK BOX)	
LAB106	BNP (B-Type Natriuretic Peptide)
LAB140	BUN
LAB53	Calcium
LAB155	Cancer Antigen 125
LAB57	CEA (Carcinoembryonic Antigen)
LAB60	Cholesterol, total
LAB61	Cortisol
LAB149	CRP (C-Reactive Protein)
LAB150	CRPHS (C-Reactive Protein), High Sensitivity
LAB62	CK (Creatine Kinase)
LAB383	Creatinine, Serum
LAB524	DHEAS (Dehydroepiandrosterone Sulfate)
LAB663	Epstein Barr Virus Antibody Panel
LAB523	Estradiol
LAB66	Ferritin
LAB69	Folate
LAB66	FSH (Follicle Stimulating Hormone)
LAB65	GGT (Gamma Glutamyl Transferase)
LAB6357	Glucose Tolerance Test, 1Hr, Gestational
LAB81	Glucose, Fasting
LAB82	Glucose, Random
LAB101	HDL Cholesterol
LAB90	Hemoglobin A1C (Glycohemoglobin)
LAB3900	Hemoglobin Electrophoresis
LAB798	Hepatitis A Antibody, IGM
LAB1042	Hepatitis B Core Antibody, Total
****	Hepatitis B Surface Antibody
****	Hepatitis B Surface Antigen
LAB10241	Hepatitis C Antibody with Reflex to Molecular
****	HIV 1,2 Antibody P24-Scrn or Dx (Circle one)
LAB93	Homocysteine, Total
LAB4458	HSV 1/2 IgG
LAB74	IgE
LAB174	Immunofixation Electrophoresis, Serum
LAB166	Immunoglobulins, GAM
LAB575	Insulin, Random
LAB94	Iron
LAB6951	Iron Binding Capacity with Transferrin Saturation
LAB96	LDH (Lactate Dehydrogenase)
LAB102	LDL Cholesterol, Direct
LAB98	Lead
LAB99	Lipase
LAB87	LH (Luteinizing Hormone)
LAB103	Magnesium
LAB482	Mononucleosis Screen

CHEMISTRY / IMMUNOLOGY (CHECK BOX)	
LAB160	Mumps IgG Antibody
LAB108	Parathyroid Hormone Intact
LAB113	Phosphorus
LAB114	Potassium
LAB115	Prealbumin
LAB529	Progesterone
LAB531	Prolactin
LAB1043	PSA (Prostate Specific Antigen), Screen
LAB4009	PSA (Prostate Specific Antigen), Diagnostic
LAB171	PSA (Prostate Specific Antigen), Free and Total
LAB119	Protein Electrophoresis, Serum
LAB118	Protein, Total
LAB206	Rheumatoid Factor
LAB406	Rubella Antibody IgG
****	Syphilis Antibody Treponema Pallidum Ab with Reflex to RPR
LAB124	Testosterone, Total
LAB5868	Testosterone, Free
LAB4771	Testosterone, Total, Free and Bioavailable
LAB129	TSH (Thyroid Stimulating Hormone)
LAB4049	TSH with Reflex to Free T4 (OA Only)
LAB5894	TSH with Reflex to Free T4 and FT3
LAB127	Free T4 (Thyroxine Free)
LAB137	Free T3 (Triiodothyronine Free)
LAB134	Triglycerides
LAB141	Uric Acid
LAB162	Varicella Zoster Antibody IgG
LAB67	Vitamin B12
LAB535	Vitamin D25 Hydroxy

URINE (CHECK BOX)	
LAB364	Creatinine, Random Urine
LAB669	Microalbumin Creatinine Ratio Urine
LAB439	Protein, Random Urine
LAB743	Urine Protein and Creatinine with ratio, Random Urine
LAB466	Urinalysis with Reflex to Microscopic
LAB347	Urinalysis with Reflex to Microscopic and Culture
LAB489	Urinalysis with Microscopic

TOXICOLOGY (CHECK BOX)	
LAB21	Carbamazepine (Tegretol®)
LAB23	Digoxin (Lanoxin®)
LAB4290	Drug Abuse Screen Urine 8C GCMS
LAB4852	Drug Abuse Screen Urine 9C GCMS
LAB4848	Drug Abuse Screen Urine 10C GCMS
LAB29	Lithium
LAB30	Phenobarbital
LAB31	Phenytoin (Dilantin®)
LAB24	Valproic Acid (Depakote®)
LAB40	Vancomycin, Random
LAB39	Vancomycin, Trough
****	SITE SPECIFIC TEST CODE ****

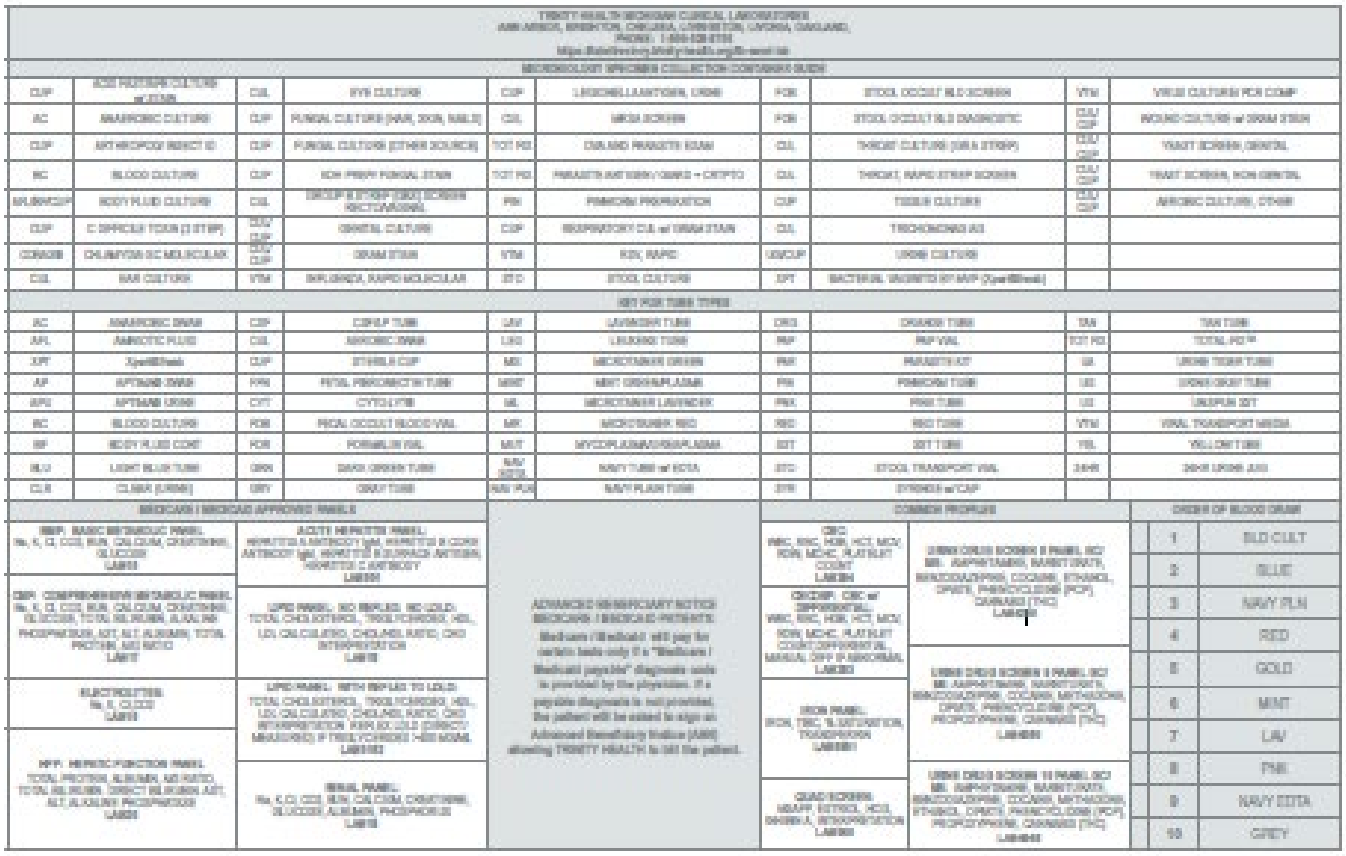
MICROBIOLOGY: ALL TESTS INCLUDE A SENSITIVITY WHEN INDICATED (CHECK BOX)	
SOURCE:	
****	Acid Fast/AFB Culture with Smear
LAB5639	Aerobic/Wound Culture w/Gram Stain
LAB233	Anaerobic Culture
LAB482	Blood Culture
LAB5615	Body Fluid Culture with Gram Stain
LAB257	C. Difficile PCR
****	Chlamydia & Neisseria Gonorrhoeae Molecular Study
LAB8198	COV/RSV/FLU A&B PCR
LAB7888	COVID PCR
LAB942	Ear Culture RT or LT (CIRCLE ONE)
LAB943	Eye Culture RT or LT (CIRCLE ONE)
LAB4413	Fungal Culture, Hair, Skin, Nails
****	Fungal Culture, Other Source
LAB7594	KOH Prep / Fungal Stain Skin, Hair, Nails
LAB485	Genital Culture
LAB4002	Genital Screen Culture: GROUP B STREP
	PENICILLIN ALLERGY: YES or NO (CIRCLE ONE)
LAB5642	Culture, Screen: Yeast
LAB397	H. Pylori Antigen, Stool
LAB572	H. Pylori Breath test
LAB4480	Herpes Simplex Virus 1/2 PCR
LAB7609	Influenza A/B Rapid Molecular
LAB234	MRSA Screening Culture
LAB10234	Occult Blood (FIT), Screen
LAB10234	Occult Blood (FIT), Diagnostic
LAB4645	Ova and Parasites
LAB5631	Respiratory Culture with Gram stain
LAB223	Stool Culture
LAB236	Strep A Culture (Throat)
LAB7999	Tissue Culture with Gram Stain
LAB4031	Trichomonas Antigen (Vag only) (AA only)
LAB921	Trichomonas Vaginalis by PCR
LAB239	Urine Culture
****	Bacterial Vaginitis

BLUE		LAV		SST		GREEN	
RED		PINK		MINT		YEL(ACD)	
NAVY EDTA		NAVY PLN		FROZEN		SWAB	
TOTAL FIX		COBAS®		XPERT®SWAB		UR GREY	
UR TIGER		UR 24H		UR CUP		BLD CULT	
VTM		STOOL		UNSPUN		OTHER	

ADDITIONAL TESTS/COMMENTS:

SEE PAGE TWO FOR SPECIMEN REQUIREMENTS

LABORATORY



Revised. July 2025

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Trinity Health Ann Arbor
Trinity Health Livingston
Chelsea Hospital
734-712-3141 • 800-528-8755

Trinity Health Livonia
734-655-2580

CYTOLOGY/MOLECULAR REQUISITION 380226

PATIENT NAME

BIRTHDATE

SEX

UNIT NO.

☐ IP - ROOM # _____ ☐ OP

COLLECTION DATE:

Patient Phone: ( )

Patient Street Address, City, State, Zip

ORDERING PHYSICIAN

COPY TO: (Please provide physician's first & last name)

Primary Insurance	Subscriber Name/Date of Birth	☐ Spouse ☐ Parent ☐ Guardian	Eff. Date
Medicare/Medicaid	☐ Hosp. ☐ Med.		
Contract #	Group #		

Other Insurance Co. Name, Address & Policy No.

DIAGNOSIS REQUIRED FOR INSURANCE BILLING
REFER TO BACK PAGE FOR DIAGNOSTIC CODES.

ICD-10 SCREENING CODES: (For GYN or GYN TL)
Z12.4 Encounter for Screening for malignant neoplasm of cervix
R87.619 Unspecified abnormal cytological findings in specimens from cervix uteri

☑ GYNECOLOGIC SAMPLES – Please check (✓) type of specimen(s)

GYN TL **SCREENING** ThinPrep (TP)	☐ Cervical ThinPrep ☐ Vaginal ThinPrep	SJTL SJTV	SJT
GYN TLDX **DIAGNOSTIC** ThinPrep	☐ Cervical ThinPrep ☐ Vaginal ThinPrep	SJTL SJTV	SJT
Add HPV to ThinPrep if ASCUS (Includes 16, 18)	(Dx code R87.610 will be added)		
Add HPV to ThinPrep (Includes 16, 18)	(Dx code Z11.51 screening)		
HPV **only** - No Pap Smear (Includes 16, 18)			
☐ Add Chlamydia/Gonorrhoeae to TP ☐ Add Chlamydia **ONLY** to TP ☐ Add Gonorrhoeae **ONLY** to TP	Diagnosis Codes Required for Insurance Billing (For CT/NG)		

☑ NON-GYNECOLOGIC SAMPLES – Please check (✓) type of specimen

☐ SPUT	Sputum	☐ BCF	Breast Cyst Fluid	☐ PEFL	Peritoneal Fluid
☐ BWBB	Bronchial Washing/Brushing	☐ NID	Nipple Discharge	☐ IPW	Intra Operative Peritoneal Washing
☐ WANG	Transbronchial (WANG) Needle Bx & Bronchial Washing/Brushing	☐ ESBW	Esophageal Brushing/Washing	☐ CSF	Spinal Fluid
☐ BAL	Bronchoalveolar Lavage	☐ GABW	Gastric Brushing/Washing	☐ FNA	Fine Needle Aspirate Specify site: _____
☐ BMA	Breast Mass Aspirate (not cyst)	☐ PERF	Pericardial Fluid		
URINE CYTOLOGY ☐ URINE, VOIDED ☐ URINE, CATHETER		☐ PLFL	Pleural Fluid	☐ CB	Fluid Cell Block

☐ URINE for **UROVYSION FISH**

For Laboratory Use Only: **Place Zebra Label Here**

HISTORY FOR GYNECOLOGIC SAMPLES

Date of LMP _____ Is patient pregnant? ☐ Yes ☐ No

☐ BCP ☐ Depo ☐ IUD ☐ Estrogen ☐ E/P

Other Hormones? _____

HPV Vaccination: ☐ No Vaccine ☐ Vaccine, partial series ☐ Vaccine complete

Hysterectomy: ☐ Total ☐ Supracervical

☐ Radiation therapy
☐ Chemotherapy
} Please give details below

PERTINENT CLINICAL HISTORY IS ABSOLUTELY NECESSARY FOR PROPER EVALUATION OF GYNECOLOGICAL AND NON-GYNECOLOGICAL SAMPLES:

_____

_____

_____

Note: Write patient's name and specimen type on attached label and affix to container.
Unlabeled specimen vials can not be accepted for testing.

Attach to Specimen Container
Pt's full name (last, first)_____
Specimen type:_____
380226
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Pt's full name (last, first)_____
Specimen type:_____
380226
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Pt's full name (last, first)_____
Specimen type:_____
380226
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Pt's full name (last, first)_____
Specimen type:_____
380226
SAINT JOSEPH MERCY HEALTH SYSTEM

Trinity Health
Trinity Health Ann Arbor Hospital
Trinity Health Livingston Hospital
Chelsea Hospital
734-712-3141 | 800-528-8755

Trinity Health Livonia Hospital
734-655-2580

SURGICAL PATHOLOGY REQUISITION

PATIENT NAME

BIRTHDATE

UNIT NO.

245885

RDERING PHYSICIAN:

Sex	Collection Date	DX ICD-9	

Patient Street Address, City, State, Zip

OPY TO:

Medicare/Medicaid	Patient Phone ( )

Primary Insurance — Subscriber Name/Relationship ☐ Spouse ☐ Patient ☐ Guardian

ysician Signature Required

Contract #	Group #

story, Clinical Finding, (duration of illness, recent change) ______________________

Recent or Current Treatment ☐ Drugs ☐ Radiation ☐ Chemotherapy ☐ Hormone (Est./Prog.) ☐ Other ______

Previous Tissue Diagnosis: ☐ SIMH ☐ CCH ☐ SIML ☐ SMMH Case Accession No. ______

eOp DX ______ PostOp Dx ______

peration ______

pecimens Submitted:

A. (1) ______ C. (3) ______ E. (5) ______ G. (7) ______

B. (2) ______ D. (4) ______ F. (6) ______ H. (8) ______

neck if wanted: PHONE NUMBER TO CALL:

☐ Frozen section
☐ Check margins
☐ Lymphoma Workup - No Frozen Section

pecial Requests:

______

Suspected/Possible Cancer Specimen (1st specimen only)
Time removed from pt. ______ (00.01 - 23:59)
Time placed in formalin ______ (00.01 - 23:59)
Info critical for tumor typing studies.

For Surgical Disposition Only ☐

or lab use only:

142471/04707 8/22

Attach to Specimen Container
Specimen ______
Pt. Name ______
In ______
Out ______
245885
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Specimen ______
Pt. Name ______
In ______
Out ______
245885
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Specimen ______
Pt. Name ______
In ______
Out ______
245885
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Specimen ______
Pt. Name ______
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Specimen ______
Pt. Name ______
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Specimen ______
Pt. Name ______
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Attach to Specimen Container
Specimen ______
Pt. Name ______
In ______
Out ______
245885
SAINT JOSEPH MERCY HEALTH SYSTEM

Attach to Specimen Container
Specimen ______
Pt. Name ______
In ______
Out ______
245885
SAINT JOSEPH MERCY HEALTH SYSTEM

Clostridium difficile Toxin A/B or Rotavirus Antigen Collection Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a stool sample. Please follow the instructions below to ensure accurate results.

Step	Instructions
1.	Confirm the collection container is labeled correctly with: • your (the patient) first and last name, • the date and time of collection, and • your date of birth **Incorrectly or incompletely labeled specimens will not be tested.** 
2.	**Do not** use laxatives, antacids, or antidiarrheal medication for at least 48 hours before collection of specimens. Only soft or liquid stools can be tested for C. difficile toxin.
3.	First pass urine into the toilet (if you must).
4.	Collect the stool specimen in the container provided or place a large plastic bag/plastic wrap may be placed over the toilet opening (but under the toilet seat) and the stool specimen passed onto the plastic. **The stool specimen must not come in contact with water or urine.** **Note:** For small children having diarrhea, fasten plastic kitchen wrap to the diaper using childproof safety pins or turn the diaper inside out. After the bowel movement, remove stool from the liner and transfer it into the collection vial. Stool collected in diapers is not acceptable.
5.	Carefully unscrew the cap from the plastic collection container. Do not touch the inside of the lid or container with your fingers.
6.	Using the applicator stick, fill the container half full. **Do not** add any foreign materials such as toilet paper or plastic wrap. Collect stool from areas that look bloody, mucoid, or watery.
7.	Close the screw cap tightly.
8.	Seal the container in the zip locked section of the bag and requisition in the pouch section of the bag.
9.	Wash your hands with soap and water.
10.	Bring the container and lab requisition to the laboratory as **soon as possible** (within 18 hours). Keep the sample refrigerated/cold until it is brought to the lab. Prolonged delays will affect the test results.

Fecal Occult Blood
Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a stool sample. Please follow the instructions below to ensure accurate results.

Step 1.	**Open the collection kit provided by your physician.**
2.	Place the collection paper inside the toilet. A piece of plastic wrap stretched over the toilet bowl may also be used.
3.	Have a bowel movement on the paper or plastic.
4.	Remove the green cap with probe from the bottle,
5.	Scrape the stool with the probe.
6.	Return the probe to the vial. Seal tightly.
7.	Complete the information on the label. Print your name, date of birth, and collect date.
8.	Package and mail immediately. The test must be received within 15 days of collection.

Ova and Parasite Examination
Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a stool sample. Please follow the instructions below to ensure accurate results.

WARNING: The preservatives in the collection containers are poisonous. Keep out of reach of children.

Step	Instructions
1	Confirm the collection container is labeled correctly with: your (the patient) first and last name date and time of collection your date of birth. 
2	**Do not** use laxatives, antacids, or antidiarrheal medication for at least a week before collection of the specimen. If these medications were used within the last week, the detection of some parasites may be compromised.
3	Collect the stool specimen in a clean wide-mouthed container (e.g., paper plate or a large plastic bag/plastic wrap may be placed over the toilet opening (but under the toilet seat) and the stool specimen passed onto the plastic. **The stool specimen must not come in contact with water or urine.** **Note:** For small children having diarrhea, fasten plastic kitchen wrap to the diaper using child proof safety pins. After the bowel movement, remove the stool from the liner and transfer it into the collection vials. Alternately the diaper may be put on "inside –out" with the outer plastic next to the child's skin. Please do this at home. Stool submitted in diapers cannot be accepted for testing.
4	Carefully unscrew the cap from the plastic collection container. Do not touch the inside of the lid or container with your fingers.
5	Using the fork/spoon which is attached to the lid of the preservative container, place scoopfuls of stool into the containers especially from areas that look bloody, mucousy or watery.
6	Add stool until the liquid comes to the 'FILL LINE' on the container. Do not overfill. Mix thoroughly with the fork/spoon.
7	Do not add any foreign materials such as toilet paper or plastic wrap. . Close the screw cap tightly. If using container with preservative, shake the container several times. . Seal the container in the zip locked section of the bag. Put the Patient History Sheet and lab requisition in the pouch section of the bag.
8	**Wash your hands with soap and water.**
9	Bring the container, requisition, and Patient History Sheet to any laboratory **as soon as possible** (within 18 hours). Keep the sample at room temperature until it is brought to the lab. DO NOT refrigerate it. Prolonged delays will affect the test results.

Pinworm Collection
Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a sample for pinworm examination. Please follow the instructions below to ensure accurate results.

Step	Instructions
1.	Confirm the collection container is labeled correctly with: your (the patient) first and last name, the date and time of collection, and another identifier such as date of birth or medical record number. **Incorrectly or incompletely labeled specimens will not be tested.**  
2.	The ideal time for this procedure is early in the morning before emptying the bowels.
3.	Unscrew the cap from the container. Inside the container is a plastic paddle. One side of the paddle is coated with a non-toxic, mildly sticky material. Do not touch the sticky surface with your fingers.
4.	Using moderate pressure, press the sticky surface against the skin surrounding the anus.
5.	Place the paddle back into the container and tighten the cap.
6.	Seal the container in the zip-locked section of the bag and lab requisition in the pouch section of the bag.
7.	Wash your hands with soap and water.
8.	Bring the container and requisition to the laboratory as soon as possible. Prolonged delays will affect the test results.

Sputum Collection
Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a sputum sample. Please follow the instructions below to ensure accurate results.

Step	Instructions
1.	Confirm the collection container is labeled correctly with: •your (the patient) first and last name, •the date and time of collection, and •another identifier such as date of birth or medical record number. **Incorrectly or incompletely labeled specimens will not be tested.** 
2.	The ideal time to collect the sample is early in the morning just after getting out of bed. However, sample may be collected at any time sputum is available to be produced.
3.	Gargle and rinse your mouth with water. Sputum collection for Culture and Sensitivity — Do not use mouthwash or brush teeth with toothpaste immediately before collection.
4.	Open the container and hold it close to your mouth.
5.	Take as deep a breath as you can and cough, deeply from within the chest. Do not spit saliva into the container.
6.	The sample you cough should look thick and white, yellow, or green in color. A A minimum of 5 mLs (approx.,1 tablespoon) of sample is required.
7.	Close the container lid tightly and give sample to your caregiver right away.
8.	If you are at home, seal the sample in the zip locked section of the bag and the lab requisition in the pouch section of the bag.
9.	Bring the container and lab requisition to the laboratory as soon as possible. If you are unable to return the sample to the laboratory right away, the sample can be stored in the refrigerator for up to 24 hours. Prolonged delays will affect the test results.
10	If your doctor has ordered multiple sputum cultures, collect only one specimen per day. Bring the sample to the laboratory within 18-24 hours of collection.

24 Hour Urine Collection
Patient Instructions

Trinity Health Ann Arbor
5301 McAuley Dr
Ypsilanti, MI 48197
Phone (734) 712-7255

Your physician has ordered a laboratory test which will require you to collect a sample for pinworm examination. Please follow the instructions below to ensure accurate results.

Step	Instructions
1.	Obtain a labeled 24-Urine container from your doctor or outpatient laboratory. It should be labeled with your name, medical record number (MRN), date of birth (DOB) and the tests that have been requested by your doctor. 
2.	The 24-Urine container may contain a preservative. If it does, follow any warnings on the container label.
3.	To get started, empty your bladder as usual but do not keep this urine. Discard it. This begins your collection period. Write the time on the label.
4.	For the next 24 hours, collect all urine in the container. If even one specimen of urine is not collected, the results will not be valid, and you must start the 24-hour
5.	At the end of the 24-hour collection period, empty your bladder one last time, save the specimen in your 24-Urine container and write the final time on the label.
6.	Keep the collection container in the refrigerator during the collection period and until you return it to your doctor or lab. Make sure you have written the beginning and ending
7.	Return the sample to your doctor's office or the lab within 24 hours.

Trinity Health
Trinity Health Ann Arbor
Department of Pathology
5301 East Huron River Drive
P.O. Box 995
Ann Arbor, Michigan 48106-0995
Phone: 734-712-3141

Lab Supply Order Form

Please allow 1 week for delivery.

To order supplies, please call
734-712-3141 or 800-528-8755
Fax 734-712-5794
Keep this form as a record of your order.

Date _____
Doctor _____
Practice Name _____
Address _____
_____
Phone _____
Ordered by _____

Ok'd by _____

Supplies are provided only for collection of specimens submitted to Trinity Health for testing and may be adjusted based on client test volume. Supplies are not provided for in-office testing or other non-laboratory usage.

Stock #	Item	Quantity	Order Qty.
	BLOOD COLLECTION		
213492	Alcohol Wipes	box 100	
149899	Bandaids	box 100	
100191	Paper Tape 3M MicroPore	roll	
BUTTERFLIES			
102216	21 gauge Butterfly	each/box	
102327	23 gauge Butterfly	each/box	
102244	25 gauge Butterfly	each/box	
NEEDLES			
102308	- 21x1 1/4	box 48	
102309	- 22x1 1/4	box 48	
365260	Tourniquets	box 250	
TUBES			
300249	- Lavender (5cc)	box 100	
343592	- Lavender (1cc) Microtainer	bag 50	
125406	- Red (5cc) Plain	box 100	
263314	- Red (1cc) Microtainer	bag 50	
300257	- Gold SST (5cc)	box 100	
300248	- Light Blue (5cc)	box 100	
263347	- Royal Blue (Plain 7cc) for Heavy Metals	each / box 100	
Warde	- Royal Blue EDTA (Na2) 7cc	each / box 100	
125349	- Yellow Top Tube (10cc ACD) Soln A (for Lead Levels)	each / box 100	
102156	Dk Green Lithium Heparin	each / box 100	
125410	Dk Green Sodium Heparin (Chromosome Studies)	each / box 100	
102323	Vacutainer Holder	pk 250	
344110	BD Urine Tube (Cauti)	each / box 100	
	CYTOLOGY		
106264	ThinPrep Kits	box/25 case/250	
147772	Cyto Broom	pk 100	
	Cyto Brushes/Spatulas	pk 25	
152687	Slides	box 72	
131002	CytoLyte (Fine Needle Aspirate)	tray 20	
	SURGICAL PATHOLOGY		
189108	- Small 20ml Formalin	box 32	
189107	- Medium 40ml Formalin	box 36	
197621	- Large 60ml Formalin	box 25	
Warde	Michele Media	each	
Warde	Flow Media (EMEM)	each	
SHARPS			
	- Small	each	
146831	- Large	each	
343780	-S22 Cauti Cup Sharps	each	
	MISCELLANEOUS		
	Plain Specimen Labels	each	
	Blood Bank Specimen Labels	each	
299065	Plastic Specimen Bags	pk 100	
306950	STAT/Red Specimen Bags	pk 100	
	Frozen Specimen Bags	pk 100	
	Large Slider Bags	pk 50	
910218	Coban	RL	

Stock #	Item	Quantity	Order Qty.
	MISCELLANEOUS (CONTINUED)		
140786/113244	Plastic tubes (w/caps)	pk 100	
Warde	Plastic amber tubes w/caps	pk 50	
253659	Glucola 50gm Orange	Case/24 pk/6	
376716	Glucola 75 gr Fruit Punch	Case/24 pk/6	
362622	Glucola 100 gr Lemon/Lime	Case/24 pk/6	
156550	Cotton Balls	pkg	
	MICROBIOLOGY		
	Blood Culture Bottles	set 2	
102525	-Adult (>12 yrs)	aerobic	
102516	8-10 mls per bottle	anaerobic	
	Culture Swabs		
153662	- Aerobic Bacti-Swab	each / pk 50	
140086	- Anaerobic /Aerobic E Swab	each	
125105	- Aerobic Bacti-061 Double Swab	each / pk 50	
	- M4 with Swab - Covid Testing	each	
	- M4 without Swab - Viral,	each	
	Herpes, Pertussis, Flu		
	- Fungal Plates	each	
	COBAS - Urine or Swab	each	
	URINE/STOOL COLLECTION		
375783	- Sterile screw cap urine cups	each / bag 100	
125354	- Urine culture boric acid	each / box 50	
Warde	- Drug Screen (Forensic)	each / ca 100	
102418	BD Vacutainer Urine Collection Cup		
	with Kit (Cauti)	each / ca 50	
399613	BD Vacutainer Urine Collection Cup		
	without Kit (Cauti)	each / ca 200	
	24 HR Specimen Containers		
305449	- Plain	each	
	- w/HCL	each	
	- w/GAA	each	
137127	Specipan (Urine Hat)	each	
112337	CCMS Towlettes	box	
	Stool Culture (C&S Media)	each / Bx 20	
	Ova & Parasite Kit – Total Fix	each / Bx 20	
	Pinworm Paddles	each	
	FOB Single Devices	each / pkg 50	
	FOB Kit	box 20	
	REQUISITIONS/FORMS		
142464	Lab Test Requisition	pk 100	
142463	Cytology Requisition	pk 100	
142471	Surgical Pathology Requisition	pk 100	
200806	Dermatopathology Requisiton	pk 100	
	Drug Screen (Forensic)	pk 100	
292287	Supply Order	pk	
	Lab Site Maps	pad	
	Glucose Tolerance Diet	each	
	Surgical Pathology Tracking Logs	pk 100	
	1* PP Instructions	pad	
	ABN Patient Forms	pk 100	
	OTHER SUPPLIES NOT LISTED (Please specify item and quantity)		

292287 R 11/22 (M)

WHITE – Laboratory • **CANARY** – Client Rep Copy

REFERENCES

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- Clinical Laboratory Standards Institute GP41---*Collection of Diagnostic Venous Blood Specimens (2017).*
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- Hologic. Visual Aids for Collection of Thin Prep Specimens. Unknown date.
- Miller, J. Michael. Handbook of Specimen Collection and Handling in Microbiology. March 1983
- SoftTech, SEMI procedures Phlebotomy and Urine Collection. 2024.
- The Joint Commission. Patient Identifiers, National Patient Safety Goals 2025.
- Warde Medical Laboratory, On-line Catalog.
- World Health Organization, Guideline on Drawing Blood, Best Practices in Phlebotomy 2010.