SPECIMEN COLLECTION AND STORAGE INFORMATION, GENERAL

PURPOSE: This policy outlines general instructions for collection and handling of specimens. Specific test requirements are listed alphabetically in the specimen requirements section of this manual.

POLICY: Specimens must be collected and stored in accordance with regulatory guidelines to ensure the safety of the patient and employee.

PROCEDURE:

- All laboratory specimens are considered potentially infectious. Clean all spills with a freshly made 10% bleach solution and water.
- You must wear protective clothing when drawing blood and handling laboratory specimens. The clothing should be non permeable. New disposable non-latex gloves must be worn with each patient blood draw. You must wash your hands between drawing each patient.
- Do not eat, drink, apply makeup, or chew gum while drawing blood or handling laboratory specimens.
- Label all specimens in the presence of the patient. Include the following on each specimen:
    - Patient Name
    - Date of Collection
    - Time of Collection
    - Initials of Collector
- On the requisition include the following:
    - Patient Name
    - Patient Date of Birth
    - Date of Collection
    - Time of Collection
    - Initials of Collector
- Refrigeration or freezing of specimens:
    - A separate refrigerator/freezer must be used to store specimens. The refrigerator/freezer must never be used to store food, drugs, or anything other than laboratory specimens.
    - The freezer must not be a self-defrosting freezer.
    - The refrigerator must be maintained at 2-8 degrees Celsius
    - The freezer must be maintained at minus 15 to minus 30 degrees Celsius
    - To ensure the specimens are maintained at proper temperatures a temperature log must be kept with the refrigerator/freezer. The temperatures along with the initials of the person checking the refrigerator/freezer must be recorded daily on the temperature log sheet.

BLOOD SPECIMEN COLLECTION

PURPOSE: The quality of laboratory results is dependant upon the quality of specimens submitted for analysis. Good quality specimens produce good quality results useful for diagnosing and monitoring treatment.

POLICY: The laboratory regularly monitors the quality of specimens submitted for testing. If a specimen is found to be of poor quality, it will be rejected and a recollection requested.

PROCEDURE:

- Confirm proper patient identification. For alert patients, verify name and date-of-birth.
- Collect specimens for requested tests, in the proper <u>order of draw:</u>

BLOOD CULTURE	(SPS:sterile)	(Blood culture)
BRICK / RED	(no additive)	(Blood Bank & Therapeutic Drug)
LIGHT BLUE	(Citrate)	(Coagulation)
SST/GOLD with gel	(serum sep.)	(Most Chemistries)
BLACK (Auto Plus)	(Citrate)	(Sedimentation rate)
GREEN	(Sodium Heparin)	(Ammonia)
LIGHT GREEN	(Lithium Heparin)	(Troponin I)
LAVENDER	(EDTA)	(CBC, Platelets)
GRAY	(oxalate/fluoride)	(Lactic Acid)

IMPORTANT: If using a butterfly infusion set to draw specimens, the light blue top cannot be the first tube collected. A small amount of blood must be collected in a "discard" light blue tube or a red/brick tube without clot activator prior to collecting the primary blue tube for testing.

NOTE: Order of draw was established utilizing the NCCLS recommendations

- If blood is drawn in a syringe, transfer it to tubes within seconds of collection. A BD Blood Transfer Device is connected to the syringe for transferring the blood into the tubes. Syringe collected blood should be transferred to tubes utilizing the same order of draw as outlined above. The vacuum in the tube will draw in the correct amount of blood. Do not apply pressure to the syringe or force blood into the tubes.

- All tubes with anticoagulants (blue, black, yellow, green, lavender, and gray tops), are to be thoroughly mixed by **gently** inverting 8 to 10 times. Brick and SST stoppered tubes should be **gently** inverted once or twice to wet all sides of the tube.

- Label the specimens. Each tube must have the patient's full name, location, procedure or test, date and time collected, and initials of the person collecting the specimen. Do not write initials beside the barcode on the computerized labels. It interferes with the laboratory instrument properly reading the barcode.

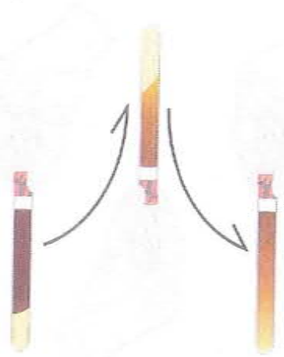
- Record time, date, and your initials on the lab slip.
- Please refer to Sample Collection for Coagulation Testing for additional information.

Processing Tubes

The vacuum blood collection tube does not fill completely to the stopper, but only to the required level. Proper dilution of the blood and additive in the tube is critical. Be sure that each tube is allowed to fill until the blood flow stops. If unsure, wait an additional 1-2 seconds before removing the tube from the holder and withdrawing the needle from the arm. Improperly filled tubes will be rejected by the laboratory, and the sample must be redrawn to ensure accurate results.

REMEMBER: Always check the expiration date on tubes prior to collection. Expired tubes will NOT be processed by the laboratory, and the sample must be redrawn to ensure accurate results.

ORDER OF DRAW	MIX BY INVERTING	ADDITIVE	EFFECTS OF UNDERFILLING
Red	X	X	Insufficient sample.
Blue	3 to 4 TIMES	• 0.105M Sodium Citrate (3.2%)	Coagulation results are erroneously prolonged. (A completely filled tube is required.)
SST	5 TIMES	• Gel Barrier Tube	Poor barrier formation; insufficient sample.
Dk Green	8 to 10 TIMES	• Sodium Heparin • Lithium Heparin	Erroneous results due to excessive heparin.
Lav	8 to 10 TIMES	• Liquid K_3 EDTA • Spray-dried K_2 EDTA (Plus)	Erroneously low blood cell counts and hematocrits; morphologic changes to RBCs; staining alterations.
Yellow	8 to 10 TIMES	• Acid Citrate Dextrose (ACD) *(do not use for blood cultures. See 1.3)*	Erroneous results due to changes in cell morphology.
Gray	8 to 10 TIMES	• Sodium Fluoride	Clotting of specimen.
Pink	8 to 10 TIMES	• Spray-dried EDTA K2 (PPT)	Quantity not sufficient to perform testing.



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.
- SST tubes may not clot completely.
- Specimen will often need to be redrawn.

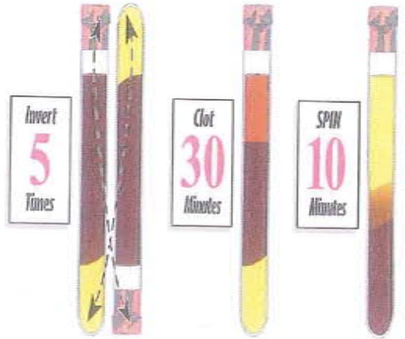
2.1
Processing Tubes and Specimens

Specimen Integrity

An unspun or poorly spun specimen allows the cells contact with the serum or plasma. Metabolic changes occur until the specimen is properly spun. Delay in processing changes the composition of the specimen and could cause erroneous values.

Centrifuge Operation

3000 RPM is the common speed under most circumstances. The majority of samples require 10 – 15 minutes of centrifugation.



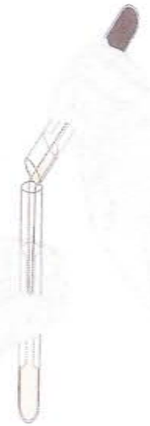
Pipette Technique

A pipette is used to remove the serum or plasma after a specimen has been spun.

When using a pipette, be cautious not to disturb the red cells. If the red cells are disturbed, re-spin the specimen and begin pipette process again.

Transfer the serum or plasma from the pipette into the transport vial and cap the vial. Store sample at the appropriate temperature as indicated for the testing requested.

Send ONLY the transport vial to the laboratory for testing. DO NOT send the original tube.



Pour Technique

Slowly pour the required amount of serum into the transport vial and cap the vial. Store sample at the appropriate temperature as indicated for the testing requested. Do not pour a sample without a gel barrier in the specimen collection tube.

Using the pipette technique is the appropriate method to remove serum or plasma from a non-gel barrier tube. Send ONLY the transport vial to the laboratory for testing. DO NOT send the original tube.

Sample Collection for Coagulation Testing

1. **Collection Tube.** Blood should be collected in a blue-top tube containing 3.2% buffered sodium citrate.
2. **High Hematocrit Samples.** Patients with elevated hematocrits have a relatively low amount of plasma for a given whole blood (collection) volume. This tends to effectively increase the plasma citrate concentration. If the patient has a known hematocrit >55%, the amount of citrate in the collection tube must be decreased according to the formula below:

Citrate volume = (100 - hematocrit) / (595 - hematocrit) x total volume

Example:
Patient hematocrit = 60%
Total volume = 5 mL (standard citrated plasma collection tube volume)
(100 - 60) / (595 - 60) x 5 = 0.33 mL sodium citrate

3. **Order of Draw.** A discard tube is not required prior to collection of coagulation samples, unless using a winged blood collection kit (butterfly) as stated in number 5 below. When non-citrate tubes are collected for other tests, collect sterile and nonadditive (red top) tubes prior to citrate (blue top) tubes. Any tube containing an alternate anticoagulant should be collected after the blue-top tube. Gel-barrier tubes and serum tubes with clot initiators should also be collected after the citrate tubes.
4. **Venipuncture Technique.** To avoid contaminating the sample with tissue thromboplastin, the venipuncture must be clean, with no trauma. Hemolyzed samples are not acceptable.
5. **Winged blood collection kits (butterfly) must use a discard lead tube prior to collecting specimen tube to submit for testing.**
6. **Fill Volume.** Evacuated collection tubes must be filled to completion to ensure that a 9:1 blood-to-anticoagulant ratio is achieved. Underfilling of citrate collection tubes results in an increased anticoagulant-to-blood ratio and can extend clot-based coagulation assays. **Note:** Never combine two underfilled tubes together.
7. **Mixing.** The sample should be mixed immediately by gentle inversion at least six times to ensure adequate mixing of the anticoagulant with the blood.
8. **Plasma Processing.** Transfer the sample as soon as possible (preferably within 30 minutes of collection). Transfer plasma using a plastic pipette into a LabCorp PP transpak frozen purple tube with screw cap (LabCorp N ° 49482). Note that glass should not be used because glass can activate the clotting cascade. Label each tube "plasma, citrate." The specimen should be **frozen** immediately and maintained frozen until tested. To avoid delays in turnaround time when requesting multiple tests on frozen samples, please submit separate frozen specimens for each test requested.

Con't - Sample Collection for Coagulation Testing

Platelet-poor Plasma (PPP) Collection for Lupus Anticoagulant Testing

Lupus anticoagulants (LA) are nonspecific antibodies that extend clot-based coagulation assays as the result of their interaction with phospholipid in the reaction mixture. Platelets in plasma samples can act as a source of phospholipid and mask the effects of LA. For this reason, it is important to prepare platelet-poor plasma (PPP) for LA testing. PPP should have a platelet count <10,000/mcL. PPP samples should be collected by double centrifugation.

1. Centrifuge for 10 minutes and carefully remove two-thirds of the plasma using a plastic transfer pipette, being careful not to disturb the cells.
2. Deliver plasma to a plastic transfer tube, cap, and re-centrifuge for 10 minutes.
3. Use a second plastic pipette to remove the plasma, staying clear of the platelets at the bottom of the tube.
4. Transfer plasma using a plastic pipette into a purple screw cap "freezer" transport tube(LabCorp N ° 49482). Label each tube "plasma, citrate."
5. The specimen should be **frozen** immediately and maintained frozen until tested. To avoid delays in turnaround time when requesting multiple tests on frozen samples, please submit separate frozen specimens for each test requested.

THERAPEUTIC DRUG MONITORING

PURPOSE: Accurate time records are very important in interpreting serum drug. Levels. The result of a drug level determination depends on when the doses are given, when the blood specimen is drawn, route of administration, and how long the patient has been receiving the drug. Time to steady state may be prolonged in renal or hepatic failure where the dosage is decreased accordingly.

POLICY: Peak, Trough and Random levels are available on therapeutic drugs. Those marked with an (*) are available at the ECH laboratory. The other drugs will be referred to another laboratory.

PROCEDURE: The chart below lists the optimal time of draw for the most common therapeutic drugs.

DRUG	STEADY STATE	TIME TO DRAW
Amikacin	5-35 hours	Peak: 30 min after end of infusion
		1 hour after dose is scheduled
		Trough: No sooner than 30 min prior to dose
* Carbamazepine	6 days	30 min. prior to dose
* Depakote	30-85 hours	
* Digoxin		30 min. prior to dose or 6 hours after dose
* Gentamicin	2.5-75 hours	Peak: 30 min after end of infusion
		1 hour after dose is scheduled
		Trough: No sooner than 30 min prior to dose
Lidocaine		12-24 hours after start of the maintenance infusion
* Lithium	5 days	Prior to AM dose
* Phenytoin	5 days	IV: 2-4 hours after, or 30 min prior to dose
		ORAL: 30 min prior to dose
* Phenobarbital	18 days	IV: 1 hour after dose
		ORAL: 30 min prior to dose
Procainamide	24 hours	IV: 30 min after loading dose and 24 hours
		after start of maintenance infusion
		ORAL: 30 min prior to dose

Quinidine	2 days	30 min prior to dose
* Theophylline	tablets or soln: 24-36 hr	IV: At least 24 hours after start of infusion
	IV: 6-12 hours	ORAL: 30 min prior to dose
* Tobramycin	2.5-75 hours	Peak: 1/2 hour after the end of infusion
		1 hour after dose is scheduled
		Trough: 30 min prior to dose
* Vancomycin		Peak: 1 hour after the end of infusion
		2 hours after dose is scheduled
		Trough: 30 min prior to 3rd dose

Handling, Transport, and Storage of Specimens

Excerpt from *Procedures for the Handling and Processing of Blood Specimens; Approved Guideline—Third Edition (H18-A3)*

Specimen Handling	
Serum	• Specimens should be clotted before centrifugation. • Spontaneous and complete clotting normally occurs within 30 to 60 minutes at room temperature. **NOTE:** The use of a wooden applicator stick or similar device for the release of a clot attached to the tube closure or the sides of the tube (i.e., "rimming") is not recommended as it is a potential source for laboratory-induced hemolysis. • The time to clot will be prolonged if the patient is on anticoagulant therapy or if the specimen is chilled.
Plasma	• Use a collection device containing an anticoagulant when plasma is required. • Centrifuge anticoagulated specimens immediately after collection.
Chilled Specimens	• To chill a specimen, place it immediately in either crushed ice or a mixture of ice and water. Good contact between the cooling medium and the specimen is essential. • Chilling a specimen inhibits the metabolism of blood cells and stabilizes certain thermolabile constituents. • Do not chill whole blood specimens unless there are documented recommendations for so doing.
Preservatives	• Collection devices containing an additive (e.g., fluorides) can prevent concentration changes within the specimen over extended periods of time and should be avoided. • Use sodium fluoride to stabilize glucose in the presence of blood cells for up to 24 hours at 22 to 25 °C or 48 hours at 2 to 8 °C. • Use microcollection devices containing a suitable antiglycolytic agent for pediatric blood glucose collection.
Criteria for Rejection	Under the following conditions, blood specimens may not be acceptable for testing purposes: • Inadequate Specimen Identification • Inappropriate Volume of Blood • Using the Wrong Collection Tube • Hemolysis • Improper Storage/Transportation

Quick Guide

CLINICAL AND LABORATORY STANDARDS INSTITUTE®

Handling, Transport, and Storage of Specimens *(Continued)*

Specimen Transport	
Time	• Transport specimens in the appropriate biohazard bags or containers to the laboratory in as short a time as possible. • Unless chilling of the samples is required (e.g., lactic acid, ammonia), transport all samples at room temperature. • Prompt removal of specimens from the collection area is especially important if the area temperature is above 22 °C, which may cause some analytes to deteriorate. • If an uncentrifuged whole blood specimen is to be sent to the laboratory for testing, it must reach the laboratory in time to be processed with serum/plasma separation occurring in a time limit to protect the stability of the analytes.
Temperature	• Keep chilled specimens at 2 to 8 °C until they are ready to be centrifuged.
Tube Orientation	• Place tubes of blood in a vertical, closure-up position upon delivery to the laboratory. **NOTE:** Evaluate automated transport systems, pneumatic or otherwise, for any effects on laboratory results prior to use.
Tube Closure	• Keep tubes of blood closed at all times. Keeping the tube in a closed position eliminates possible exogenous contamination of the specimen and prevents evaporation and the possibility of spills and aerosols.
Agitation	• Gentle handling of collected specimens helps to minimize erythrocyte damage leading to hemolysis of specimens.
Exposure to Light	• Avoid exposing blood specimens for photosensitive analytes (e.g., bilirubin) to artificial light or sunlight (ultraviolet) for any length of time. • Protect these specimens with an aluminum foil wrap, an amber specimen container, or the equivalent.

Handling, Transport, and Storage of Specimens *(Continued)*

Specimen Processing	
General	• ***RECOMMENDATION:*** Physically separate serum or plasma from contact with cells as soon as possible, unless conclusive evidence indicates that longer contact times do not contribute to result error. **A maximum limit of TWO HOURS from the time of collection is recommended.** • Blood specimens for serum samples should be adequately clotted before centrifugation. • Centrifuge tubes with their closures in place and with a centrifuge that has an adequate closure.
Centrifuge Time and Relative Centrifugal Force (rcf)	• Consult the manufacturer's literature, which makes recommendations for specific blood collection devices.
Temperature	• Centrifuge chilled specimens that are transported to the laboratory under temperature-controlled conditions. • Separate specific thermolabile analytes (e.g., ACTH, cyclic-AMP) at 4 °C. • Use temperature-controlled centrifuges.
Recentrifugation	• Do not centrifuge specimens for **potassium** measurement more than once. Results will be falsely increased. • DO NOT attempt to harvest additional serum/plasma AFTER serum/plasma has been removed from non-gel or gel tubes.

BLOOD CULTURE SPECIMEN COLLECTION

PURPOSE: This policy provides detailed instructions for the collection of blood culture samples.

POLICY: A blood specimen is collected in an aseptic manner and placed in a bacterial growth media to determine the presence of systemic infection. Bactec Plus Blood Culture Bottles are used, both aerobic and anaerobic. These bottles contain a resin which neutralizes the antimicrobial activity of antibiotics present in the patient's blood.

MATERIALS: 70% isopropyl alcohol preps; ChloraPrep One-Step Frepp Applicators; Butterfly blood collection sets with multiple sample Luer Adapter; Bactec Blood Culture Bottles

PROCEDURE:

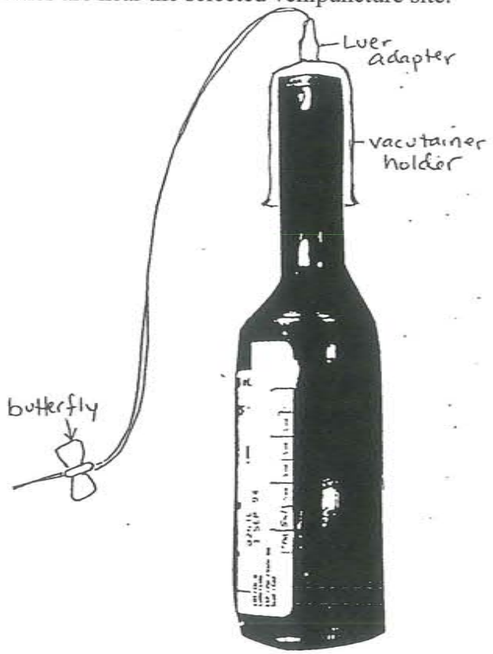
- Always collect blood cultures before other specimens.
    - Fill the **aerobic bottle first**, followed by the **anaerobic bottle**.
- Assess the patient's arm first. The combination of bottles used will depend on the type of patient. If the patient is a small child or if it appears that the patient's vein may be extremely small, use a Peds Plus bottle rather than the Plus Aerobic. The bottles will need to be filled according to the guidelines on the table provided.

GUIDELINES FOR THE INCCULATION OF BACTEC BLOOD CULTURE BOTTLES

Volume of Blood Specimen (ml)	**Volume of Blood added to bottle**	
	Plus Aerobic	Plus Anaerobic
15	10	5
14	10	4
13	10	3
12	9	3
11	8	3
10	7	3
9	6	3
8	5	3
	Peds Plus	Plus Anaerobic
7	4	3
6	3	3
5 or less	Entire specimen into this bottle	

- Prep the septum of each bottle with an alcohol prep pad and allow to dry.
- While the alcohol is drying, mark each bottle along the line of graduation on the label (see illustration), estimating the amount of blood needed according to the guidelines listed in this procedure.
- Mix bottles gently to ensure all of the solution is at the bottom of the Bactec bottles.
- Sterilize the selected venipuncture site with the ChloraPrepp One-Step Frepp Applicator
    - Remove Frepp carefully from kit, without touching the foam surface of the applicator. Hold by the center of the handle, in a horizontal position, with the foam surface down. Pinch handle to break the ampoule. DO NOT CONTINUE TO SQUEEZE HANDLE.
    - Apply the foam surface to the site; depress foam against surface once or twice to saturate foam. **For dry sites:** Cleanse area thoroughly by repeated back and forth strokes of the applicator for approx. **30 seconds**. **Do not blot or wipe away, allow to air dry. For moist sites:** Cleanse area thoroughly by repeated back and forth strokes of the applicator for **approx. 2 minutes**. Completely wet the area with the antiseptic. Allow the area to air dry for **approx. one (1) minute**. **Do not blot or wipe away. Discard applicator after a single use.**

- Do not re-palpate venipuncture site after it has been properly disinfected.
- Place the bottles upright on a convenient surface near the patient's arm so that the bottles are near the selected venipuncture site.



- Perform the venipuncture. Push the vacutainer holder onto the **aerobic** blood culture bottle, keeping the blood culture bottle standing upright during the venipuncture. Allow the bottle to fill up to your mark. Remove the vacutainer holder and slide onto the next **anaerobic** bottle, repeating the procedure of filling. Gently mix blood in bottles after collection.
- After the second bottle is filled, additional blood specimens may be collected, using the vacutainer system.
- Label the bottles properly, including the time the blood was drawn and transport promptly to the lab. Any specimens being collected by the nurse from a line or port must be marked with the type of line that was used.
- The blood may also be collected using a syringe. Determine the amount of blood necessary and collect into a syringe. Replace with a clean needle. Inoculate the blood culture bottles directly by inserting the needle through the clean septum of each bottle. The aerobic bottle must be inoculated first, then the anaerobic bottle. Be sure to stop the flow of blood from the syringe just before the blood volume is depleted. DO NOT expel air into the anaerobic bottle.

URINE COLLECTIONS

PURPOSE: Particular attention to specimen collection of urine specimens is required to minimize bacterial contamination or over-growth. This procedure outlines the necessary steps for the collection of specimens for routine, culture and 24 hour analysis.

POLICY: All urine specimens should be collected in accordance with this procedure to ensure the best quality results.

PROCEDURE:

- **Routine Urinalysis:** The optimal specimen is the first morning void that is refrigerated for no more than 8 hours; however, specimens refrigerated up to 24 hours will be accepted.
  - Collect in clean dry container.
  - Keep specimen at refrigerator temperature.
  - Record patient name, date and time of collection on the container.
  - Indicate whether collection was a clean-catch or catheterization specimen.

- **Urinalysis with Culture if Indicated:**
  - Collect urine in a sterile container supplied by either the physician or the Laboratory.
  - Patient must use the supplied towlette to prep the urinary opening.
  - Transfer a portion of the urine specimen from the primary collection container to a transport tube by using a urine transport kit.
  - Keep both specimens (Sterile primary collection and transport tube at refrigerator temperature and transport to the lab as soon as possible.
  - Record on both specimens the patient name, date and time of collection.
  - Indicate whether collection was a clean-catch or catheterization specimen.

- **Urine Culture (Clean Catch or Cath):**
  - Collect urine in a sterile container supplied by either the physician or the Laboratory.
  - Patient must use the supplied towlette to prep the urinary opening.
  - Transfer a portion of the urine specimen from the primary collection container to a transport tube by using a urine transport kit.
  - Keep both specimens (Sterile primary collection and transport tube at refrigerator temperature and transport to the lab as soon as possible.
  - Record on both specimens the patient name, date and time of collection.
  - Indicate whether collection was a clean-catch or catheterization specimen.

- **24 Hour Urine Specimens:**
  - Obtain appropriate container(s) from either the physician or Laboratory.
  - Record physician name, patient name, date of collection and testing required on specimen container(s).
  - Recommended collection instructions:

- Upon arising in the morning, urinate into the toilet, emptying your bladder completely. Do not collect this sample. Record the exact time and print it on the container label.
- Void (urinate) into the smaller container or "hat" provided and transfer the urine into the larger 24 hr collection container. Do not urinate directly into the 24 hr collection container; personal injury may result.
- Do **not** add anything but urine to the container and do **not** pour out any liquid or powder that may already be in the collection container.
- Collect all urine voided for the next 24hours. All urine passed during the 24-hour time period (day or night) must be saved. Urine passed during bowel movements must also be collected, but do not put stool in the collection container.
- Refrigerate the collected urine between all voids or keep it in a cool place. E.g. a tub or cooler with ice in it.
- At exactly the same time the following morning, void completely again (first time after awakening), and add this sample to the collection container. This completes your 24-hour collection.
- Take the 24-hour specimen to the physician's office or laboratory as soon as possible, maintaining the cool temperature in transit by placing the specimen in a portable cooler or insulated bag.

INTERFERING SUBSTANCES : CATECHOLAMINES

Plasma, Physiological (in vivo)

No Effect:	***Increase Effect:***	***Con't Increase Effect:***
Indomethacin	Ajmaline	Isoproterenol
Ramipril	Aminophylline	MAO Inhibitors
	Chlorpromazine	Methyldopa
Decrease Effect:	Clonidine	Nitroglycerin
Captopril	Cocoa	Perphenazine
Reserpine	Cyclopropane	Phenothiazines
	Diazoxide	Phentolamine
	Epinephrine	Promethazine
	Ethanol	Stress
	Ether	

Urine, Physiological (in vivo)

No Effect:	***Decrease Effect:***	***Increase Effect:***
Acetaminophen	Clonidine	Ethanol
Amphetamine	Decaborane	Isoproterenol
Aspirin	Diurnal variation	Muscular exercise
Cannabis	Guanethidine	Nicotine
Chlordiazepoxide	Methyldopa	Nitroglycerin
Chlorothiazide	Ouabain	Pain
Diazepam	Radiographic agents	Prochlorperazine
Diphenhydramine	Reserpine	Rauwolfiz
Ephedrin	Sleep	Reserpine
Glucose	Tosylate bretylium	Smoking
Hydralazine		
Mecamylamine		
Meprobamate		
Muscular exercise		
Oral contraceptives		
Phenobarbital		
Phentolamine		

INTERFERING SUBSTANCES: CITRATE

Urine, Physiological (in vivo)

No Effect:	***Decrease Effect:***	***Increase Effect:***
Bedrest	Acetazolamide	Citrates
Lithium	Parathyroid extract	Bendrofluazide
		Cellulose phosphate
		Chlorothiazide
		Hydrochlorothiazide
		Polythiazide
		Thiazides

INTERFERING SUBSTANCES: CORTISOL, FREE

Urine, Physiological (in vivo)

No Effect:	***Decrease Effect:***	***Increase Effect:***
	Ketoconazole	Estrogens
	Lead	Oral contraceptives
		Sandfly fever

INTERFERING SUBSTANCES: 17-HYDROXYCORTICOSTEROIDS

Urine, Analytical (in vivo)

No Effect:	***Increase Effect:***	***Con't Increase Effect:***
Alclometasone	Acetazolamide	Meprobamate
Amphetamine	Acetone	Methenamine
Aspirin	Antihypertensive agents	Methyprylon
Barbiturates	Ascorbic acid	Oleandomycin
Chloramphenicol	Carbamazepine	Paraldehyde
Chlordiazepoxide	Cefoxitin	Penicillin
Dextroamphetamine	Cephalothin	Perphenazine
Nalidixic acid	Chloral hydrate	Phenazopyyridine
Penicillin	Chlordiazepoxide	Phenothiazines
Phenobarbital	Chlormerodrin	Piperidine
Phenytoin	Chlorothiazide	Potassium iodide
Propoxyphene	Chlorpromazine	Prochlorperazine
Quinine	Colchicine	Promazine
Secobarbital	Dexamethasone	Quinidine
	Digitoxin	Quinine
Decrease Effect:	Digoxin	Spironolactone
Aspirin	Erythromycin	Sulfamerazine
Carbamazepine	Ethinamate	Testosterone
Estrogens	Etryptamine	Tranquilizers
Hydralazine	Fructose	Vitamin K
Phenytoin	Glutethimide	
Prochlorperazine	Hydroxyzine	
Promethazine	Iodides	
Reserpine		
Salicylate		

Urine, Physiological (in vivo)

No Effect:	***Decrease Effect:***	***Con't Decrease Effect:***
Acetaminophen	Aminoglutethimide	Promazine
Amobarbital	Barbiturates	Propoxyphene
Aspirin	Blindness	Rauwolfia
Barbiturates	Calcium gluconate	Reserpine
Bedrest	Carbon disulfide	SKF-12218
Chlordiazepoxide	Chlorpromazine	
Clopamide	Corticosteroids	
Cromoglycate	Corticotropin	***Increase Effect:***
Diazepam	Dexamethasone	Betamethaswone
Diphenhydramine	Estrogens	Chlorthalidone
Iothalamate	Ethinyl estradiol	Corticotropin
Nitrazepam	Lead	Cortisone
Phenobarbital	Levodopa	Diethylstilbestrol
Smokine	MAO inhibitors	Diurnal variation
Starvation	Medroxyprogesterone	Ethinyl estradiol
	Meperidine	Gonadotropin
	Methandrostenolone	Histamine
	Methylethinylestradiol	Metyrapone
	Metyrapone	Muscular exercise
	Mitotane	Sleep deprivation
	Morphine	
	Norethynodrel	
	Oral contraceptives	
	Pentazocine	
	Perphenazine	
	Phenobarbital	
	Phenothiazines	
	Phenylbutazone	
	Phenytoin	
	Progesterone	

Reference: LabCorp Directory of Services 2007-2008

INTERFERING SUBSTANCES: HYDROXYINDOLEACETIC ACID (5-HIAA)		
Urine, Physiological (in vivo) ***No Effect:*** Amantadine Barbiturates	***Decrease Effect:*** Aging Chlorophenylalanine Corticotropin Ethanol Heparin Hydrazine derivatives Imipramine Iosocarboxazid Isoniazid Levodopa MAO inhibitors Methyldopa Streptozocin	***Increase Effect:*** Avocados Eggplant Fluorouracil ***Melphalan*** Methamphetamine Nicotine Phenmetrazine Pineapples Plums Pregnancy Rauwolfia Reserpine Sleep deprivation Smoking Walnuts

INTERFERING SUBSTANCES SEROTONIN (5-HYDROXYTRYPTAMINE):		
Plasma, Physiological (in vivo) ***No Effect:***	***Decrease Effect:*** Methysergide Reserpine	***Increase Effect:*** Diurnal variation MAO inhibitors
Blood, Physiological (in vivo) ***No Effect:*** Food	***Decrease Effect:***	***Increase Effect:***

INTERFERING SUBSTANCES: 17-KETOGENIC STEROIDS		
Urine, Analytical (in vivo) ***No Effect:*** Ampicillin Carbamazepine Chlorothiazide Glutethimide ***Decrease Effect:*** Chlordiazepoxide Glucose Iodipamide Iothalamate Meprobamate Metyrapone Radiographic acid	***Increase Effect:*** Acetazolamide Acetone Acetophenon Cephaloridine Cephalothin Chlordiazepoxide Chlorpromazine Digitoxin Etryptamine Hydralazine Hydroxyzine Meprobamate Methyprylon	***Con't Increase Effect:*** Nalidixic acid Oleandomycin Paraldehyde Penicillin Phenaglycodol Phenazopyriding Phenothiazines Quinine Spironolactone
Urine, Physiological (in vivo) ***No Effect:*** Carbamazepine Iothalamate Oxytocin	***Decrease Effect:*** Ampicillin Dexamethasone Oral contraceptives	**Increase Effect** Ampicillin Cortisone Metyrapone

INTERFERING SUBSTANCES: 17-KETOSTEROIDS

Urine, Analytical (in vivo)

No Effect:	***Decrease Effect:***	***Con't Increase Effect:***
Acetazolamide	Carbamazepine	Chlorpromazine
Amphetamine	Chlordiazepoxide	Cloxacillinq
Ampicillin	Chlormerodrin	Dexamethasone
Aspirin	Digoxin	Erythromycin
Barbiturates	Estrogens	Ethinamate
Chlordiazepoxide	Glucose	Etryptamine
Chlorothiazide	Meprobamate	Meprobamate
Dextroamphetamine	Metyrapone	Methicillin
Digitoxin	Promazine	Methyprylon
Gentamicin	Propoxyphene	Morphine
Glutethimide	Reserpine	Malidixic acid
Hydralazine	Secobarbital	Oleandomycin
Hydroxyzine	Spironolactone	Oxacillin
Perphenazine		Penicillin
Phenobarbital	***Increase Effect:***	Phenaglycodol
Phenytoin	Acetone	Phenazopyridine
Prochlorperazine	Acetophenone	Phenothiazines
Propoxyphene	Antihypertensive agents	Piperidine
Testosterone	Ascorbic acid	Qauinidine
	Cephaloridine	Reserpine
	Cephalothin	Secobarbital
	Chloramphenicol	Spironolactone
	Chlorothiazide	Tranquilzers

Urine, Physiological (in vivo)

No Effect:	***Con't Decrease Effect:***	***Con't Decrease Effect:***
Acetaminophen	Chlorpromazine	Pyrazinamide
Aspirin	Corticosteroids	Spironolactone
Barbiturates	Corticotropin	
Carbamazepine	Cortisone	***Increase Effect:***
Chlordiazepoxide	Dluoxymesterone	Aging
Clopamide	Menopause	Ampicillin
Diazepam	Meperidine	Chlorpromazine
Diphenhydramine	Methandrostenolone	Chlorthalidone
Iothalamate	Metronidazole	Corticotropin
Lead	Morphine	Danazol
Phenobarbital	Noise	Diurnal variation
	Oral contraceptives	Ethinyl estradiol
Decrease Effect:	Oxymetholone	Gonadotropin
Aminoglutethimide	Phenothiazines	Muscular exercise
Ampicillin	Phenytoin	Nandrolone
Betamethasone	Probenecid	Pregnancy
Blindness	Propoxyphene	Testolactone
Carbon disulfide	Pyrazinamide	

INTERFERING SUBSTANCES: METANEPHRINE

Urine, Analytical (in vivo)		
No Effect:	***Decrease Effect:***	***Increase Effect:***
		Buspirone (antianxiety)
Urine, Physiological (in vivo)		
No Effect:	***Decrease Effect:***	***Increase Effect:***
	Levodopa	Hydrazine derivatives
		MAO inhibitors
		Prochlorperazine

Reference: LabCorp Directory of Services 2007-2008

INTERFERING SUBSTANCES: OXALATE		
Urine, Analytical (in vivo) ***No Effect:*** Ascorbic acid	***Decrease Effect:*** Ascorbic acid Calcium carbamide	***Increase Effect:*** Ascorbic acid Homogentisic acid
Urine, Physiological (in vivo) ***No Effect:*** Ascorbic acid Citrates	***Decrease Effect:*** Pyridoxine	***Increase Effect:*** Ascorbic acid Ethylene glycol Methoxyflurane Oxalate

INTERFERING SUBSTANCES : VANILLYMANDELIC ACID (VMA)		
Urine, Physiological (in vivo)		
No Effect:	***Decrease Effect:***	***Increase Effect:***
Amphetamine	Clonidine	Ajmaline
Angiotensin	Debrisoquin	Chlorpromazine
Antibiotics	Disulfiram	Creatinine clearance
Barbiturates	Ethanol	Diurnal variation
Chlorothiazide	Guanethidine	Epinephrine
Clopamide	Hydrazine derivatives	Glucagon
Dextroamphetamine	Imipramine	Guanethidine
Digoxin	Isocarboxazid	Histamine
Ephedrine	Levodopa	Insulin
Hydralazine	MAO inhibitors	Isoproterenol
Isoproterenol	Methyldopa	Ketosis
Mecamylamine	Morphine	Levarterenol
Meprobamate	Nialamide	Levodopa
Molindone	Phenothiazines	Lithium
Neomycin	Radiographic agents	Methyldopa
Oral contraceptives	Reserpine	Muscular exercise
Phenoxybenzamine	Uremia	Nitroglycerin
Phentolamine		Prochlorperazine
Prochlorperazine		Rauwolfia
Season		Reserpine
Smoking		Starvation
Thiothixene		Syrosingopine

Evangelical Community Hospital

OVA AND PARASITE STOOL COLLECTION INSTRUCTIONS

If you have any questions about collecting, or submitting specimens please call the hospital Laboratory at 570-522-2963.

Your doctor will instruct you on the total number of kits to be submitted. Typically 3 Ova and Parasite Kits (collected every other day) for each patient being tested are recommended.

PATIENT INSTRUCTIONS

1. The Ova and Parasite Collection kit includes a 10% formalin vial (PINK), a PVA vial (GRAY), Para-Pak vial (ORANGE) and an EMPTY Clean vial (White) shown below. Stool specimens collected in anything other than these vials may be considered unsatisfactory for testing. It is necessary to use all the vials when collecting a single specimen (same bowel movement) so that a complete Ova and Parasite exam can be done. Specimens must be fresh when placed in the vials. CAUTION: SOLUTIONS ARE POISONOUS, DO NOT DRINK.

2. Please read all instructions before collecting the specimen.
3. **Please label both vials with Patient Name and Date of Birth**. Any vials that are received without the patient name and date of birth will be considered unsatisfactory and discarded without testing. **Please include the date and time the specimen was collected.**
4. Collect the fecal specimen (bowel movement) in a wide mouth container, bedpan, or on a clean newspaper, plastic bag, or piece of saran wrap placed over the toilet seat opening. These will prevent the fecal specimen from falling into the toilet. **Please do not mix urine with the sample**. Urine mixed in the sample may result in an unsatisfactory specimen. Do Not retrieve fecal samples from the toilet water. Toilet water may result in an unsatisfactory specimen.

Evangelical Community Hospital

OVA AND PARASITE STOOL COLLECTION INSTRUCTIONS

5. Remove the vials from the zip lock bag. Carefully open the vials**. Do not spill or dump out any of the liquid in the vials.** Using the spork (collection spoon/fork attached to the cap) add approximately 3 spoonfuls of hard stool, or 5 spoonfuls of soft stool (from the same bowel movement) to each vial. It is important to sample the areas of the stool that appear bloody, slimy, or watery. If the stool is hard, take a small amount of the stool from each end and from the middle of the specimen.

***** Your kits vial caps will be Pink, Gray, Orange and White.**

6. The stool added to the liquid in the vial should reach the RED LINE on the front of each vial. Thoroughly mix the specimen and the liquid in each vial using the spork. Replace the caps and the spork onto the correct vials. **Close tightly.** Invert each vial until the specimen is well mixed.
7. Wash hands thoroughly.
8. Return the vials to the zip lock bag and seal securely. These specimens do not require refrigeration.
9. Wash hands thoroughly.

Specimens should be submitted to the Laboratory as soon as possible.

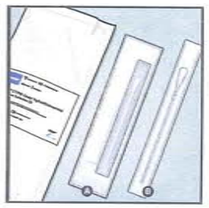
Xpert® CT/NG Endocervical Specimen Collection

PI49 Rev.00 Date 2012/12

1 The Xpert® CT/NG Vaginal/ Endocervical Specimen Collection kit contains

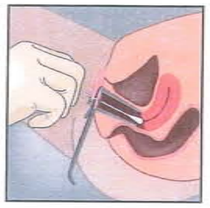
Ⓐ Individual Collection Kit

Ⓑ Cleaning Swab



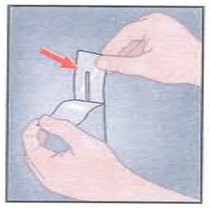
2 Remove excess mucus from the cervix and surrounding area using the large individually wrapped cleaning swab Ⓑ.

Discard the swab.

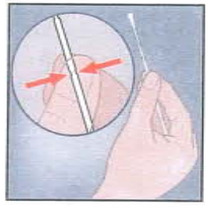


3 Open package Ⓐ that contains the pink-capped Xpert Swab Transport Reagent tube and individually wrapped collection swab. Set the tube aside before beginning to collect sample.

Open the collection swab wrapper by peeling open the top of the wrapper.

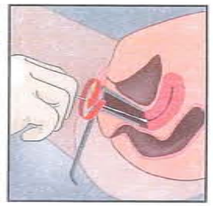


4 Hold the swab in your hand, placing your thumb and forefinger in the middle of the swab shaft.



5 Insert the collection swab into the endocervical canal. Rotate the swab clockwise for 10-30 seconds in the endocervical canal.

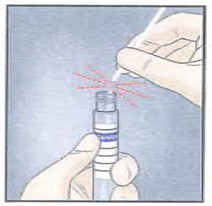
Withdraw the swab carefully.



6 Unscrew the cap from the transport tube.

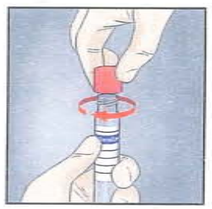
Immediately place the specimen collection swab into the transport reagent tube.

7 Identifying the scoreline, break the swab shaft against the side of the tube. Discard the top portion of the swab shaft.



8 Re-cap the swap transport reagent tube and tighten the cap securely.

Label the transport tube with the sample identification information, including date of the collection, as required.



 In Vitro Diagnostic Medical Device CE IVD

301-1791, Rev. A December, 2012

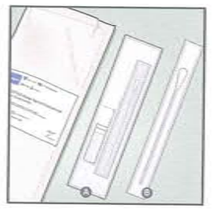
Cepheid. A better way.

Xpert® CT/NG Patient-Collected Vaginal Swab Specimen Collection

PI48 Rev.00 Date 2012/12

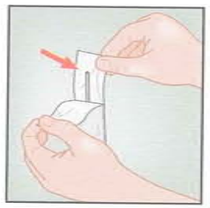
1 Open the individual collection package Ⓐ that contains the pink-capped Xpert® Swab Transport Reagent tube and individually wrapped collection swab. Set the tube aside before beginning to collect sample.

Discard the larger swab Ⓑ.

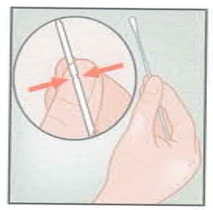


2 Open the collection swab wrapper by peeling open the top of the wrapper.

Remove the swab, taking care not to touch the tip or lay it down.



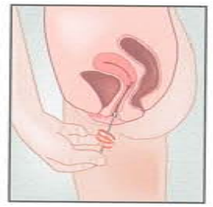
3 Hold the swab in your hand, placing your thumb and forefinger in the middle of the swab shaft across the scoreline.



4 Carefully insert the swab into your vagina about two inches inside the opening of the vagina.

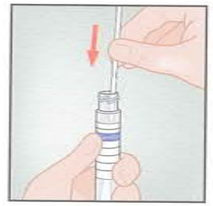
5 Gently rotate the swab for 10 – 30 seconds. Ensure the swab touches the walls of the vagina so that moisture is absorbed by the swab.

Withdraw the swab and continue to hold it in your hand.



6 Unscrew the cap from the transport tube.

Immediately place the collection swab into the transport tube.



7 Identifying the scoreline, break the swab shaft against the side of the tube. Discard the top portion of the swab shaft.

Avoid splashing contents on the skin. Wash with soap and water if exposed.

8 Re-cap the transport tube and tighten the cap securely.

Return the tube as instructed by your doctor, nurse or care-provider.

Note: Health care provider should label the transport tube with the sample identification information, including date of the collection, as required.

In Vitro Diagnostic Medical Device CE IVD

301-1790, Rev. A December, 2012

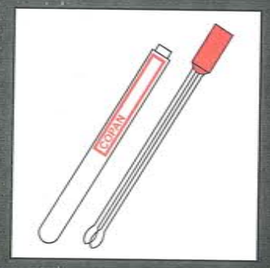
Cepheid. A better way.

Xpert™ MRSA Specimen Collection Protocol

Xpert™ MRSA

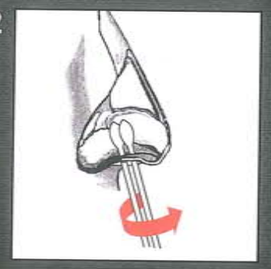
Note: When possible, prior to specimen collection, have patient blow his/her nose.

1



A Copan Venturi Transystem double-swab must be used to collect the specimen. Cepheid Collection Device #900-0370

2

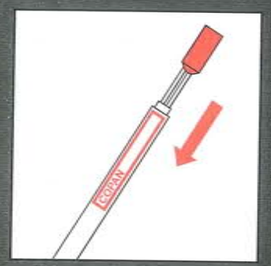


Insert the dry swabs 1–2 cm into the nostril and rotate swabs against the inside of the nostril for 3 seconds while applying pressure with a finger to the outside of the nose.

3

Repeat Step 2 in second nostril with the same swabs.

4



Place the swabs back into the tube.

5

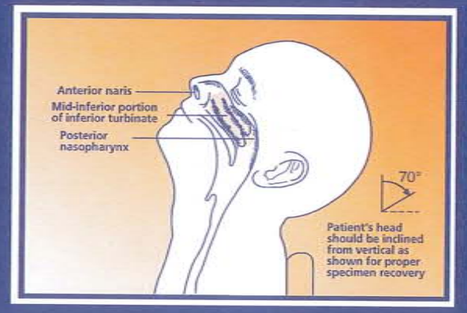
Specimens that can be tested within 24 hours can be kept at room temperature. If not, it is recommended that they be refrigerated. Specimens stored at 2–8° C are stable for up to 5 days.

defining *on-demand* molecular diagnostics.

Cepheid
Bring answers to life.

For Technical Assistance please contact: Cepheid Technical Support: 888-838-3222, Option 2

NASOPHARYNGEAL SPECIMEN COLLECTION



Specimen collection procedures appropriate for use with the following BD Directigen™ rapid test kits:

Product	Unit	Cat. No.
Directigen™ EZ RSV	30 Test Kit	256030
Directigen™ RSV	20 Test Kit	253020
Directigen™ RSV	40 Test Kit	253040
Directigen™ Flu A+B	20 Test Kit	256010
Directigen™ Flu A	20 Test Kit	256020

BD CultureSwab™ collection and transport systems for use with BD Directigen™ rapid test kits:

Product	Unit	Cat. No.
BD CultureSwab™	Liquid Amies, Reg. Alum. Wire	220129
BD CultureSwab™	Liquid Amies, Soft Alum. Wire	220130
BD CultureSwab™	Liquid Amies, Flex. Alum. Wire	220131
BD CultureSwab™	Liquid Stuart, Reg. Alum. Wire	220132
BD CultureSwab™	Liquid Stuart, Soft Alum. Wire	220133
BD CultureSwab™	Liquid Stuart, Flex. Alum. Wire	220134

Vacuum-assisted Nasopharyngeal Aspirate Method

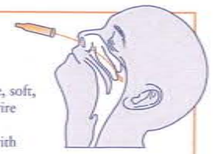
Materials: Suction outlet (portable/wall)
Sterile suctio catheter
Mucus trap (i.e., Luken's tube)
Viral Transport Medium (VTM)

1. Attach mucus trap to suction outlet and catheter, leaving wrapper on suction catheter; turn on suction and adjust to suggested pressure.
2. Without applying suction, insert catheter into the nose, directed posteriorly and toward the opening of the external ear. NOTE: Depth of insertion necessary to reach posterior pharynx is equivalent to distance between anterior naris and external opening of the ear.
3. Apply suction. Using a rotating movement, slowly withdraw catheter. NOTE: Catheter should remain in nasopharynx for a minimal period of time, not to exceed 10 sec.
4. Hold trap upright to prevent secretions from going into pump.
5. Rinse catheter (if necessary) with approximately 2.0 mL VTM; disconnect suction; connect tubing to arm of mucus trap to seal.
6. Repeating procedure for the second nostril will deliver optimal combined sample.
7. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

Patient Age	Catheter Size (French)**	Suction Pressure
Premature infant	6	80-100 mmHg
Infant	6	80-100 mmHg
Toddler / Preschooler	8	100-120 mmHg
School age	8	100-120 mmHg
Adolescent / Adult	8	120-150 mmHg

** To determine length of catheter tubing, measure distance from tip of nose to external opening of ear.

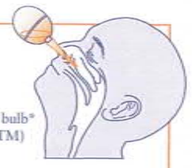
Nasopharyngeal Swab Method



Materials: BD CultureSwab flexible, soft, or regular aluminum wire products *or*
Nasopharyngeal swab with synthetic fiber tip
1-2 mL Viral Transport Medium (VTM)
Specimen container

1. Insert swab into one nostril.
2. Rotate swab over surface of posterior nasopharynx.
3. Withdraw swab from collection site; insert into transport tube or container with VTM.
4. Repeating procedure for the second nostril will deliver optimal combined sample.
5. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

Nasopharyngeal Wash: Bulb Method

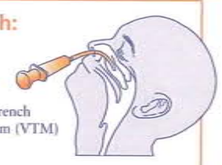


Materials: Saline
1-2 oz. tapered sterile rubber bulb*
Viral Transport Medium (VTM)
Specimen container

1. Suction 3-5 mL saline into a new sterile bulb.
2. Insert bulb into one nostril until nostril is occluded.
3. Instill saline into nostril with one squeeze of the bulb and immediately release bulb to collect recoverable nasal specimen.
4. Empty bulb into sterile specimen container with suitable VTM, according to virology laboratory requirements.
5. Repeating procedure for the second nostril will deliver optimal combined sample.
6. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

* Length and diameter of bulb as appropriate for infant, child or adult.

Nasopharyngeal Wash: Syringe Method



Materials: Saline
3-5 mL syringe*
2" Sterile NG tube 8-french
Viral Transport Medium (VTM)
Specimen container

1. Fill syringe with saline; attach tubing to syringe tip.
2. Quickly instill saline into nostril.
3a. Aspirate the recoverable nasopharyngeal specimen. Recovery must occur immediately, as the instilled fluid will rapidly drain.
3b. *(Alternate)* In appropriate cases, patients may tilt head forward to allow specimen to drain into suitable sterile container.
4. *(If aspirated)* Inject aspirated specimen from syringe into sterile specimen container with suitable VTM, according to virology laboratory requirements.
5. Repeating procedure for the second nostril will deliver optimal combined sample.
6. After collection, immediately transport specimen to the laboratory for viral testing and viral antigen detection. If transport to the laboratory is delayed, place specimen on ice or in refrigeration.

* Length and diameter of syringe and tubing as appropriate for infant, child or adult.

BD

BD Diagnostics
7 Loveton Circle
Sparks, MD 21152-0999
800.638.8663
www.bd.com/ds

2-2452 February 2005 Printed in USA

Vaginal/Rectal Specimen Collection Protocol

for use with Xpert™ GBS and Smart GBS

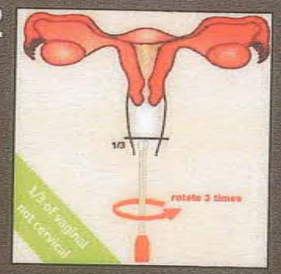
Xpert™ GBS

Sample must be collected prior to examination process.

1

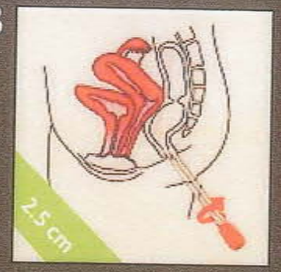
Excessive secretion or discharge MUST be wiped away from the vaginal/rectal area. *A Copan Venturi Transystem double swab must be used to collect the specimen.*
Cepheid Collection Device #900-0370

2



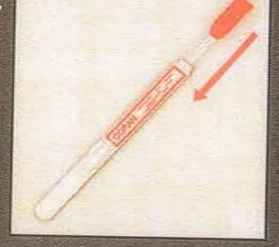
Carefully insert the double swab into the lower third of patient's vagina and sample secretions from the mucosa. Rotate swab 3 times to ensure uniform sample on both swabs. Do not collect cervical sample.

3



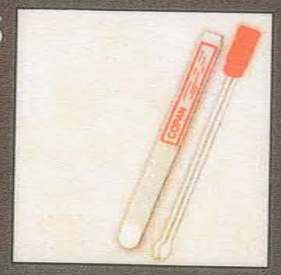
Using the same double swab, carefully insert the swab approximately 2.5 cm beyond the anal sphincter and gently rotate to sample anal crypts.

4



Place the swabs back in the tube.

5



Specimens that can be tested within 24 hours can be kept at room temperature; if not, it is recommended that they be refrigerated. Specimens stored at 2–8°C are stable for up to 6 days.

defining *on-demand* molecular diagnostics

Cepheid®
Bring answers to life.

For Technical Assistance please contact: Cepheid Technical Support: 888-838-3222, Option 2

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DEPARTMENT OF PATHOLOGY - 570-522-2510

Hemoccult ® BRAND

ROUTINE SCREENING TEST FOR FECAL OCCULT BLOOD

PATIENT INSTRUCTIONS FOR INPATIENTS AND EMERGENCY ROOM:

- Do not collect samples during, or until three days after your menstrual period or while you have bleeding hemorrhoids or blood in your urine.
- Do not consume the following drugs, vitamins and or foods:

*Avoid 7 days prior to and during the test period:
Aspirin or other non-steroidal anti-inflammatory drugs
*Avoid for 72 hours prior to and during the test period:
Vitamin C in excess of 250 mg per day (from all sources, dietary and supplemental).
Caution: some iron supplements contain quantities of Vitamin C which exceed 250 mg per day.
* Red meat (*beef, lamb*) including processed meats and liver.
* Raw fruits and vegetables (*especially melons, radishes, turnips and horseradish*).

SPECIMEN COLLECTION

The Hemoccult test requires only a small fecal specimen. The specimen is applied to the guaiac paper of the Hemoccult Slide.

- Collect samples from three consecutive bowel movements or three bowel movements closely spaced in time.
- For the most accurate test results collect each stool sample before contact with the toilet bowl water. Collect sample in a clean dry container.
- Fill out the patient information on the appropriate side of the Hemoccult slide. Be sure to include date and time specimen was collected.
- Open the cover on the side of the slide that has the patient information.
- Using an applicator stick, collect a small fecal sample.
- Apply a thin smear, covering box A.
- Reuse the applicator to obtain a second sample from a different part of the fecal sample and apply a thin smear, covering box B.
- Close cover flap. Discard applicator stick.
- Slides should be stored at Room Temperature until tested.
- Send specimen to the lab A.S.A.P. after the collection.

HEMOSURE IFOB TESTING FOR OCCULT BLOOD
PATIENT INSTRUCTIONS FOR OUTPATIENTS

HEMOSURE® iFOB TEST

One-step Immunological Fecal Occult Blood Test

Part No: YI0311-067

Patient Instructions

For assistance with these instructions contact:
- Your physician's office

–or–

- Hemosure technical support: 1-888-Hemosure (436-6787)
Monday - Friday, 8:00 am to 5:30 pm, P.S.T.
E-mail: techsupport@hemosure.com

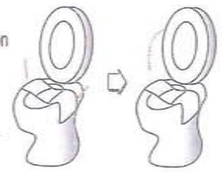
STEP 1

Sample Deposit

Fill out personal information on attached label on tubes.

Attention!

A Lift toilet seat and position sample collection paper across the rim of the toilet bowl. Secure adhesive tabs to the sides of toilet rim. Lower the toilet seat.

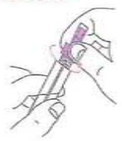


B Make bowel movement onto collection paper.

STEP 2

Sample Collection

A Unscrew the purple cap from the sample collection tube. DO NOT POUR OUT THE LIQUID.



B Poke spiral applicator into stool at 6 different sites. Use only enough fecal material to cover the tip of the applicator. DO NOT CLUMP, SCOOP, OR FILL THE TUBE.

C Screw the applicator back into the tube and secure tightly.

STEP 3

Sample Return

A Complete the address return envelope to your doctor or laboratory.

B Insert sample collection tube into specimen pouch and seal. Insert specimen pouch into return envelope and seal.

C Return the sample packet immediately to the clinic or laboratory by mail or in person.

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Patient Instructions for Semen Collection

Fertility testing, Complete Semen Analysis:
All Complete Semen samples for Fertility testing **MUST** be scheduled with the laboratory prior to collection. Patients should call 570-522-2522 to schedule an appointment.
Any sample received without an appointment will be rejected.

Post – Vasectomy semen specimens: No appointment is necessary. Specimens are accepted Monday through Friday 06:30 AM – 7 PM and Saturday 7AM - 10:30 AM.

Instructions:
Specimen must be brought to the Laboratory within 1 hour after collection.
Specimens may be collected at the hospital.

1. A container for collection may be supplied by the Doctor's office or can be picked up at the Out Patient Laboratory collection window.
2. Do not have sex or masturbate for at least 2 days prior to collection but no more than 7 days.
3. Write your name, date and time clearly on the container.
4. Collect your semen sample in the container by:
   a. Masturbation: ***This is the recommended method of collection. Do not use lubricants.***
   b. Interruption of intercourse. This is not recommended. The use of condoms is not recommended.
5. After collection is complete keep the container close to your body for warmth. Avoid exposing sample to extreme temperatures.
6. Complete all the questions on the Fertility Testing Questionnaire. This form should have been supplied to you by your doctor's office or it can be obtained at the laboratory.
7. Bring your sample with all the paper work to the testing laboratory on the ground floor (see map attached) within 1 hour after collection. Paper work includes:
   - The test requisition
   - The Fertility Testing Questionnaire
8. After you have delivered the semen specimen to the laboratory you will go to registration on the 1st floor of the hospital to be registered.

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Fertility Testing Questionnaire

Name_____ _____ _____
Last (please print) First M

Dr. Name _____

Date of Collection: _____ **Time of Collection:** _____

Please circle the appropriate answer for the following questions.

1. **Number of days of abstinence from intercourse/ masturbation.** (circle one)

   1 2 3 4 5 6 7 8 9 10 more then 10

2. **What method did you use for the collection of this sample?** (circle one)

   Masturbation Interruption of intercourse (not recommended)

3. **Were lubricants used during specimen collection? (Lubricants are not recommended)** (circle one)
   Yes No

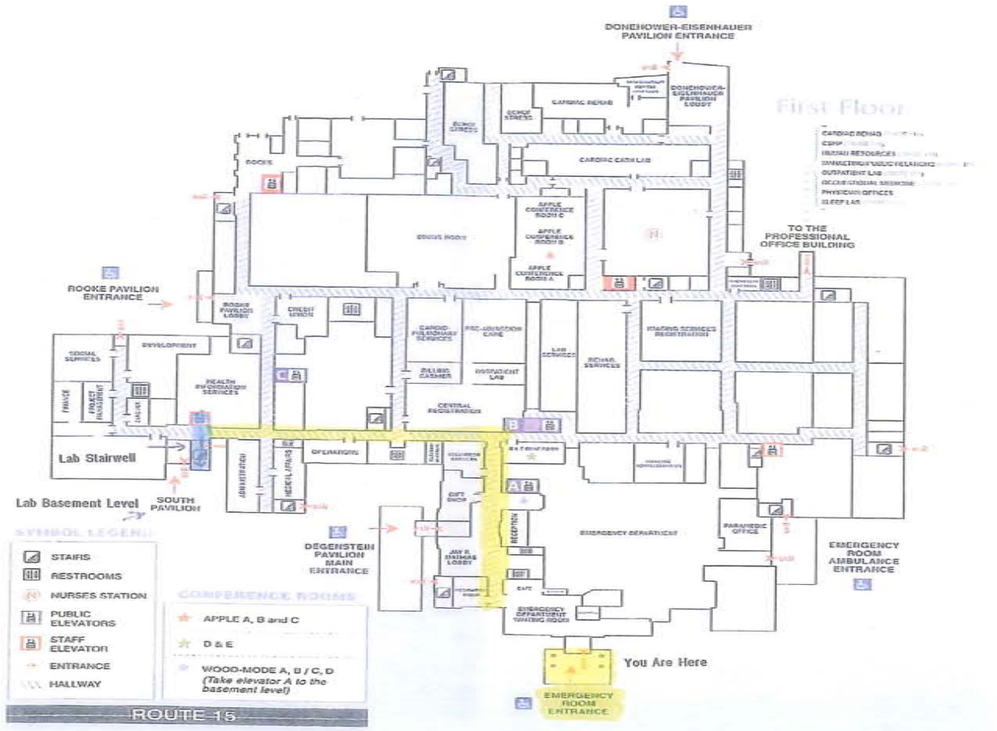
4. **Were there any problems during or after collection (e.g. incomplete collection or spills) that would affect specimen volume?** (circle one)
   Yes No

If yes, please specify_____

5. **Was specimen kept warm during transport? (It is recommended that specimen be kept close to the body during transportation)**

   Yes NO

CAMPUS MAPS



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