

INSTRUCTIONS FOR ANTERIOR NARES SAMPLE COLLECTION USING ESWAB™

COLLECTION SUPPLIES

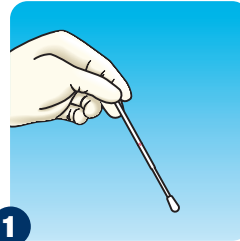
- Swab (1)
- Tube of medium (1)



COLLECT THE SAMPLE

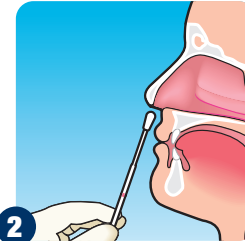


Wash hands with soap and water and don personal protective equipment.



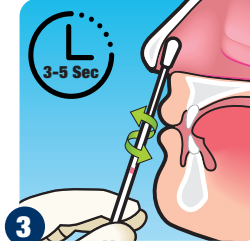
1

Remove the swab from its packaging, holding by the end of the applicator and identify the breaking point.



2

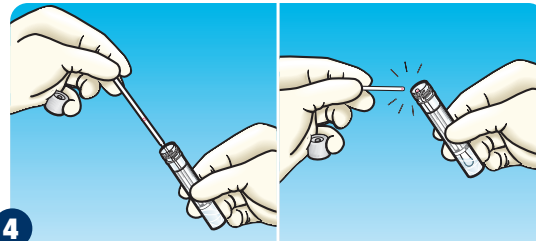
Position head slightly back, and insert the swab into the LEFT nostril and gently push the swab until a slight resistance is met (less than one inch into the nostril).



3

- When the swab is in place, rotate in a circular motion for 3-5 seconds.
- Remove the swab from nostril and repeat steps on RIGHT nostril, removing the swab when finished.

PACKAGE THE SAMPLE



4

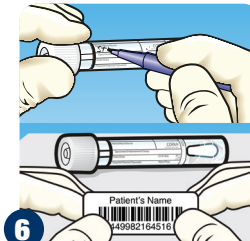
While holding the swab, remove the cap from the tube.

- Insert the swab into the tube until the breakpoint is level with the tube opening.
- Bend the swab shaft at a 180 degrees angle to break it off at the breaking point. You may need to gently rotate the swab shaft to complete the breakage.



5

Discard the broken part of the applicator into an approved waste disposal container.



6

Screw the cap back onto the tube and apply patient identification label or write patient information on the tube label.



Wash hands with soap and water.

This guide is for Illustration Purposes Only. Always read the manufacturer's package insert for specific instructions regarding specimen collection and transport for the type of test kit being used.



RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

USING WINGED BLOOD COLLECTION SET (PREFERRED METHOD OF COLLECTION)

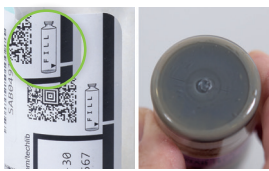
STEP 1 CHECK PATIENT ID AND PREPARE MATERIALS



- Confirm the **patient's identity**.



- Prepare the **collection kit**.



- Do not inoculate bottles **past their expiration date**.
- Do not use bottles showing signs of **damage, deterioration, or contamination**.
- Identify the **fill-to mark or mark the target fill level** on the label.

STEP 2 PREPARE BOTTLES FOR INOCULATION



- Wash hands or use an alcohol hand rub.



- Remove the plastic "**flip-cap**".
- Disinfect the bottle septum and **allow to dry**.

STEP 3 PREPARE VENIPUNCTURE SITE



- Apply a disposable **tourniquet**.



- Palpate to find a vein.
- Apply clean examination gloves.



- Disinfect the skin.
- Allow the site to **air dry**.

STEP 4 VENIPUNCTURE



- Attach the collection set to the **adapter cap**.*



- To prevent contamination, **do not re-palpate**.
- **Insert the needle** into the prepared vein.

STEP 5 BOTTLE INOCULATION

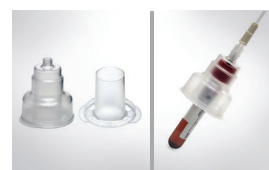


- Collect the **aerobic bottle first**.
- Place adapter cap **over bottle top**.
- Press **straight down** to pierce septum.
- Hold the bottle **upright** below the venipuncture site.†
- Collect **10 mL** of blood per **adult bottle** or up to **4 mL** per **pediatric bottle**.



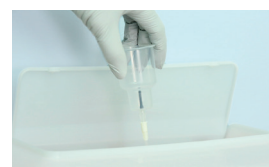
- Ensure the bottle is **correctly filled to the Fill-to Mark** or target fill level, as shown.
- Repeat for the **anaerobic bottle**.

STEP 6 OTHER BLOOD TESTS



- **Always collect blood cultures first**.
- If the adapter cap used requires an insert, **place the insert into the cap** before collecting blood for other tests.

STEP 7 FINISH THE PROCEDURE



- Discard the collection set into a sharps container and **cover the puncture site**.
- Remove gloves and **wash hands**.



- Record **collection date, time and site** and **label bottles** according to your facility's recommendations.
- Transport inoculated bottles **as quickly as possible** to the laboratory for testing in the BACT/ALERT® blood culture system.‡

* The use of blood collection sets without adapter caps 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.

‡ Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI* (Principles and procedures for Blood Cultures; Approved Guideline, CLSI* document M47-A. Clinical and Laboratory Standards Institute (CLSI)*; Wayne, PA 2007). If delays are expected, it is important to refer to the manufacturer's Instructions for Use for guidance.

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 has made every effort to provide content that observes best practices for blood culture collection. However, the information on this poster is given as a guideline for reference purposes only and is not intended to be exhaustive, nor to be medical advice. Always consult a medical director, physician or other qualified health care provider regarding processes and/or protocols for diagnosis and treatment of a medical condition.



PIONEERING DIAGNOSTICS

RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

USING NEEDLE AND SYRINGE*

Wherever possible, replace conventional needles and syringes with winged blood collection sets, which are safer.⁽¹⁻³⁾

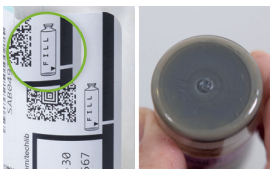
STEP 1 CHECK PATIENT ID AND PREPARE MATERIALS



- Confirm the **patient's identity**.



- Prepare the **collection kit**.



- Do not inoculate bottles **past their expiration date**.
- Do not use bottles showing signs of **damage, deterioration, or contamination**.
- Identify the **fill-to mark or mark the target fill level** on the label.

STEP 2 PREPARE BOTTLES FOR INOCULATION



- **Wash hands** or use an alcohol hand rub.



- Remove the plastic "**flip-cap**".
- **Disinfect the bottle septum and allow to dry**.

STEP 3 PREPARE VENIPUNCTURE SITE



- Apply a disposable **tourniquet**.



- **Palpate** to find a vein.
- Apply **clean examination gloves**.



- **Disinfect the skin**.
- Allow the site to **air dry**.

STEP 4 VENIPUNCTURE



- Attach the needle to a syringe.



- To prevent contamination, **do not re-palpate**.
- **Insert the needle** into the prepared vein.
- **Collect the sample**.

STEP 5 BOTTLE INOCULATION



- Attach a transfer safety device.
- Inoculate the **anaerobic bottle first**.
- Hold the bottle **upright**.
- Add **10 mL** of blood per **adult bottle** or **up to 4 mL** per **pediatric bottle**.
- Repeat for the **aerobic bottle**.
- Hold the bottle **upright**.
- Add **10 mL** of blood per **adult bottle** and **4 mL** per **pediatric bottle**.



- Ensure the bottle is **correctly filled to the fill-to mark or target fill level**, as shown.

STEP 6 OTHER BLOOD TESTS



- If collecting blood for additional tests, **always collect blood cultures first**.

STEP 7 FINISH THE PROCEDURE



- **Discard the needle and syringe** into a sharps container and **cover the puncture site**.
- Remove gloves and **wash hands**.



- Record **collection date, time and site** and **label bottles** according to your facility's recommendations.
- Transport inoculated bottles as **quickly as possible** to the laboratory for testing in the **BACT/ALERT®** blood culture system.‡

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* Refer to recognized guidelines such as: • http://www.who.int/injection_safety/phleb_final_screen_ready.pdf • <http://www.cdc.gov/niosh/docs/2000-108/pdfs/2000-108.pdf>

‡ Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI* (Principles and procedures for Blood Cultures; Approved Guideline, CLSI* document M47-A, Clinical and Laboratory Standards Institute (CLSI); Wayne, PA 2007). 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, Khanna N, Orr D. **Peripheral blood culture contamination in adults and venepuncture technique: prospective cohort study.** *J Clin Pathol.* 2008;61:509-513. 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.

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ESwab Specimen Collection Instructions

Per the manufacturer, COPAN Diagnostics, “ESwab is a liquid based multipurpose collection and transport system that maintains the viability of aerobic, anaerobic and fastidious bacteria for up to 48 hours. The ESwab system collects and releases more specimen, significantly improving patient test results and decreasing the need for repeat testing due to insufficient sample.

ESwab replaced multiple transport devices with just one system, eliminating the need to stock multiple types of swabs.”

ESwab Collection Instructions:

1. Perform hand hygiene and put on gloves if necessary.
2. Positively identify the patient using at least two patient identifiers. (i.e. Name, DOB, etc.)
3. Open the ESwab peel pouch and remove the swab.
4. Collect the patient sample using the swab. (Note: Touching the swab applicator below the pink breakpoint should be avoided as it could lead to contamination and incorrect results.)
5. Remove the screw cap from the ESwab tube and insert the swab all the way to the bottom of the tube.
6. While holding the tube away from your face, hold the end of the swab shaft and bend it at a 180-degree angle to break it at the marked breakpoint.
7. Screw the cap on tightly to prevent leakage.
8. Dispose of the swab shaft in a regular trash can.
9. Apply the patient information label to the tube. (Do not cover the tube’s lot number or expiration date.)
10. Place the tube in a biohazard transport bag.
11. Remove gloves if necessary and perform hand hygiene.



Cautionary Notes per the manufacturer:

Do not send a dry ESwab as this will lead to unsatisfactory results.

If the tube spills its contents prior to inserting the swab, the liquid is non-toxic. Put the swab in another tube before sending it to the laboratory and discard the spilled tube.

If the tube spills after contamination from inserting the swab, follow your facilities instructions for blood and body fluid clean up. Refer to your facility’s infection control manual for further instruction.

If contaminated fluid splashes onto the personnel collecting the sample, treat it as a blood and body fluid exposure. Refer to your facility’s infection control manual for further instruction.

Urine Culture Specimen Collection Guide

BD Vacutainer® C&S Preservative Urine Tubes Intended Use

Per the manufacturer, “Bacteria quantification in urine is widely used as an aid in evaluating a patient for urinary tract infections. Colony forming units of 100,000 microorganisms or greater per milliliter of urine are generally considered indicative of infection.

Urine frequently supports the proliferation of bacteria, which may multiply at the same rate as in the nutrient broth. Therefore, a urine sample delayed in transit or left at room temperature for an extended period of time may give an erroneous result.

As a means of preventing growth of the microorganisms from sources exogenous to the bladder, refrigeration or culturing within 2 hours of micturition is recommended. It is not always within the control of the laboratory to maintain the parameters necessary for accurate results.

All BD Vacutainer® C&S Preservative Urine Tubes are intended for the collection and transport of urine samples for culture and sensitivity testing of bacteria.

The tubes are filled with a lyophilized urine maintenance formula and evacuated to draw approximately 4.0 mL of urine. The lyophilized urine maintenance formula can maintain the bacterial population in the urine specimen for a period of up to 48 hours at room temperature at levels comparable to those urine specimens without additive, held under refrigeration for the same period of time.”

Vacutainer Collection and Transfer Instructions

Items Needed: Gloves, Sterile Urine Cup, Cleansing Towelette, MDL Urine Culture Kit (BD Vacutainer C&S Preservative Urine Tube, Vacutainer Transfer Straw, Biohazard Bag)

1. The healthcare professional should follow their facilities’ procedure to instruct the patient on how to collect a clean-voided midstream urine specimen.
2. After collection, the healthcare professional should put on clean gloves and obtain the patient’s urine sample.
3. To transfer the urine specimen into the grey top BD C&S Preservative Urine Tube, the healthcare professional should:



- a. Put the urine container on a clean, flat surface.
- b. Place the tip of the transfer straw into the urine specimen. The container may be tipped at an angle for a low-volume specimen.
- c. Place the evacuated tube into the holder, stopper down. Push the tube over the puncture point to pierce the stopper. The BD Vacutainer C&S Preservative Urine Tube should be filled first if collecting multiple tubes.
- d. Hold the tube in position until it is filled to the line on the tube (will automatically fill to the line).
- e. Remove the tube from the holder.
- f. Mix the tube 8-10 times by inversion.
- g. Lift the transfer straw from the cup and allow the specimen to drain out. Discard the transfer straw into a sharps approved biohazard container.
- h. Label the tube and place it in a biohazard bag in preparation for transport to the laboratory.

Manufacturer (BD) Limitations of BD Vacutainer C&S Preservative Urine Tubes

1. The quantity of specimen drawn varies with altitude, ambient temperature, barometric pressure, tube age, and filling technique.
2. Urine specimen must be drawn to the minimum fill line. Vacutainer® Urine Products For collection, storage, and transport of urine specimens. Sterile except as noted. Urine Products are not made with natural or dry rubber latex.
3. It is not recommended to manually fill this tube. Removal of the stopper may compromise the sterility of the tube.
4. The maintenance formula will not inactivate antibiotics.
5. The microbial load in urine from a given patient may be influenced by the time of collection and fluid intake. Symptomatic patients may have counts below 105 microorganisms/mL if specimens are collected late in the day or if diuresis is occurring.

Low Volume Urine Collection Guide

Items Needed: Gloves, Sterile Urine Cup, Cleansing Towelette, Biohazard Bag

1. The healthcare professional should follow their facilities' procedure to instruct the patient on how to collect a clean-voided midstream urine specimen.
2. After collection, the healthcare professional should put on clean gloves and obtain the patient's urine sample.
3. The urine sample cup should be placed in a biohazard bag and put in the refrigerator in preparation for transportation to the laboratory.

References

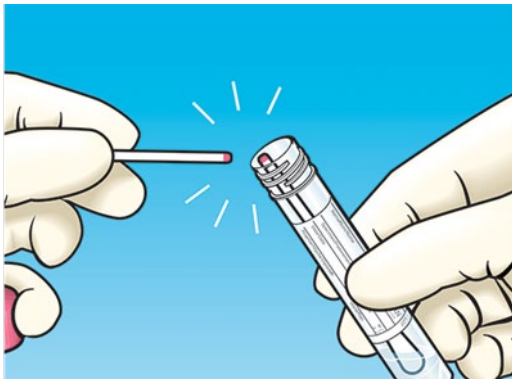
BD Vacutainer® C&S Preservative Urine Tubes [BD Vacutainer® Urine Products], Franklin Lakes, NJ: Becton, Dickinson and Company; 2021.

Viral Nasopharyngeal Swab Specimen Collection Instructions

Included in this kit a pre-labeled viral transport media tube, a nasopharyngeal flock swab, a biohazard bag with absorbent material.

NOTE: Nasopharyngeal collection requires a medical professional wearing PPE as defined by the CDC. DO NOT use kit if the specimen collection tube is damaged, broken, or leaking.

1. Clean hands prior to collection with alcohol-based sanitizer or soap and water.
2. Confirm patient identity using two identifiers (i.e. DOB, name, etc) before collection.
3. Patient should be seated in an upright position.
4. Remove the swab and insert into the nostril parallel to the palate until resistance is encountered (or the distance is equivalent to that from the ear to the nostril indicating contact with the nasopharynx). Gently rub and roll the swab. Leave swab in place for several seconds to absorb secretions. Slowly remove the swab while rotating it.



5. Remove the lid from the tube containing the transport media and break the swab off against the side of the tube, into the media, approximately 2 inches above the tip. Replace the lid securely on the collection tube. Place sample in biohazard bag. Failure to properly secure lid may result in specimen rejection or delayed testing.
6. Clean hands with alcohol-based sanitizer or soap and water.

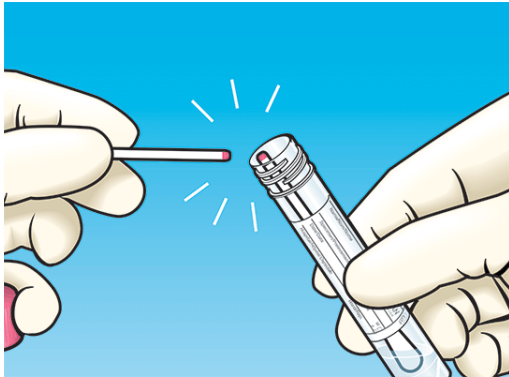
Samples are stable at room temperature for up to 72 hours. After 72 hours, samples degrade at room temperature which increases the likelihood of indeterminate results. To maintain the sample's quality after 72 hours, refrigerate the sample at 35.6 °F - 46.4 °F. Discard and recollect any samples older than 7 days.

Viral Oropharyngeal Swab Specimen Collection Instructions

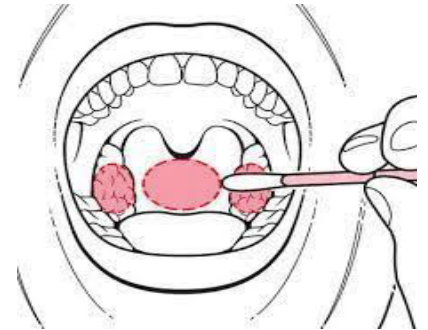
Included in this kit: a pre-labeled viral transport media tube, an oropharyngeal swab, a biohazard bag with absorbent material

NOTE: Oropharyngeal collection requires a medical professional wearing PPE as defined by the CDC. DO NOT use kit if the specimen collection tube is damaged, broken, or leaking.

1. Clean hands prior to collection with alcohol-based sanitizer or soap and water.
2. Confirm patient identity using two identifiers (i.e. DOB, name, etc.) before collecting the sample.
3. The patient should be seated in an upright position.
4. Remove the swab and insert into the posterior pharynx and tonsillar areas (back of the throat). Rub the swab over both tonsillar pillars and posterior oropharynx, making sure to avoid touching the tongue, teeth, and gums (only 1 swab is needed for this collection method).



5. Remove the lid from the tube containing the transport media and break the swab off against the side of the tube, into the media, approximately 2 inches above the tip. Replace the lid securely on the collection tube. Place the sample in a biohazard bag. Failure to properly secure the lid may result in specimen rejection or delayed testing.
6. Clean hands with alcohol-based sanitizer or soap and water.



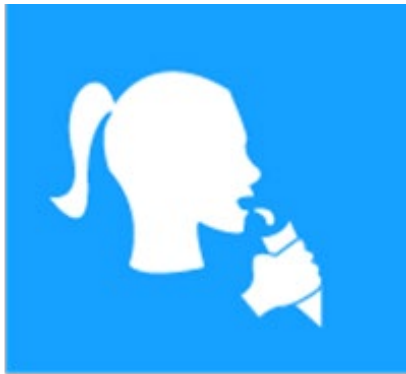
Samples are stable at room temperature for up to 72 hours. After 72 hours, samples degrade at room temperature which increases the likelihood of indeterminate results. To maintain the sample's quality after 72 hours, refrigerate the sample at 35.6 °F - 46.4 °F. Discard and recollect any samples older than 7 days.

Viral Saliva Specimen Collection Instructions

Included in this kit a pre-labeled sterile tube for saliva collection, a biohazard bag with absorbent material

NOTE: DO NOT eat, drink, smoke, brush teeth, or chew gum at least 30 minutes prior to collection. Saliva collection is intended to be self-administered in a contact-free collection method observed by a trained witness. PPE can be minimized to mask and gloves while maintaining at least 6 feet of separation. Additional PPE as defined by CDC may be worn. DO NOT use the kit if the specimen collection tube is damaged or broken.

1. Patient cleans hands prior to collection with alcohol-based sanitizer or soap and water.



2. The observer confirms patient identity using two identifiers (name, DOB, etc.) before providing the tube.

3. Patient should begin to pool saliva in their mouth-use a gentle sucking motion to help move saliva to the middle of the mouth (this should be normal saliva (spit) that collects in the mouth. DO NOT cough or sniffle to collect deep saliva/sputum).

4. The patient removes the lid of the sterile collection container and gently expels the collected

saliva into the tube until the liquid reaches the 1 mL mark on the tube (DO NOT include bubbles in the measurement). It is okay if the saliva is above the 1mL mark.

5. The patient screws the lid securely on the collection tube. Failure to properly secure the lid may result in specimen rejection or delayed testing.
6. The patient places the sample in a biohazard bag and securely seals it.
7. The patient cleans hands with alcohol-based sanitizer or soap and water. If the observer had contact with the patient, then the observer cleans hands and changes gloves.

Samples are stable at room temperature for up to 72 hours. After 72 hours, samples degrade at room temperature which increases the likelihood of indeterminate results. To maintain the sample's quality after 72 hours, refrigerate the sample at 35.6 °F - 46.4 °F. Discard and recollect any samples older than 7 days.