

# 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.