# BD Vacutainer®

## Urine Foley Catheter

### Collection Kit

### REF 364909

## Components:

**BD Vacutainer® Luer-Lok™ Access Device** STERILE EO
**BD Vacutainer® Plus C&S Preservative Tube**
**4 mL • 13 x 75 mm** IVD STERILE R
**BD Vacutainer® Plus Conical UA Tube**
**8 mL • 16 x 100 mm** IVD STERILE R

**BD Vacutainer® Luer-Lok™ Access Device is sterile within its packaging.**
**BD Vacutainer® Tube interiors are sterile.**

## Intended Use:

The BD Vacutainer® Luer-Lok™ Access Device is compatible with a foley catheter and may be used to transfer a urine specimen to BD Vacutainer® Urine Collection Tubes.

Please refer to your facility's recommended policies and procedures when collecting and transferring urine samples.

### Procedure Note:

Allow natural vacuum of tube to draw specimen into tube. Evacuated tubes are designed to draw the volume indicated. Filling is complete when vacuum no longer continues to draw. The laboratory should be consulted regarding the use of this product.

### UNIVERSAL PRECAUTIONS:

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" in biohazard containers approved for their disposal.

### Recommended Assembly And Use For BD Luer-Lok™ Access Device *(Hyperlink)*

## BD Vacutainer® Urine Tubes for Culture and Sensitivity

• The BD Vacutainer® Plus C&S Preservative Tube, 13 x 75 mm, has a 4 mL draw volume, a lyophilized maintenance formula and a gray stopper. A minimum fill line of 3 mL is indicated on the label. The product is stable when stored at temperatures of 4-25° C.

The mean concentration of the preservative in the urine sample in the BD Vacutainer® Plus C&S Preservative Tube is:

Boric acid: 2.63 mg/mL
Sodium formate: 1.65 mg/mL
Sodium borate: 2.08 mg/mL

All tubes have sterile interiors. Do not use tubes after their expiration date.

### Intended Use of BD Vacutainer® Urine Tubes for Culture and Sensitivity:

Bacteria quantification of clean-voided midstream collected urine is widely used as an aid in evaluating a patient for urinary tract infections.[1,2,3,4] Colony forming units of 100,000 microorganisms or greater per milliliter of urine are generally considered indicative of infection.[4]

Urine frequently supports the proliferation of bacteria, which may multiply at the same rate as in the nutrient broth.[5] Therefore, a urine sample delayed in transit and left at room temperature for an extended period of time may give an erroneous result.[6,7]

As a means of preventing growth of the microorganisms from sources exogenous to the bladder, refrigeration or culturing within two hours of micturition is recommended.[4,6,7] It is not always within the control of the laboratory to maintain the parameters necessary for accurate results.

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

The tubes are filled with lyophilized urine maintenance formula and evacuated to draw approximately 4 to 10 mL (depending on tube size) of urine. The lyophilized urine maintenance formula can maintain the bacterial population in the urine specimen for a period of 48 hours at room temperature at levels comparable to those urine specimens without additive, held under refrigeration for the same period of time.

The tubes provide a safe method for direct sampling of urine specimens from the BD Vacutainer® Specimen Collection Cup.

### Limitations of BD Vacutainer® Plus C&S Preservative Tubes:

1. The quantity of specimen drawn varies with altitude, ambient temperature, barometric pressure, tube age, and filling technique.
2. The maintenance fluid will not inactivate antibiotics.
3. 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.[3]
4. Do not use specimen if urine sample volume is below minimum fill line. Failure to add urine to minimum fill line on tube label could result in a reduction of microorganisms over a 24-hour period.

## BD Vacutainer® Urine Tubes for Urinalysis

• The BD Vacutainer® Plus Conical UA Tube, 16x100 mm, has an 8 mL draw volume, no additive and a yellow stopper. The product is stable when stored at temperatures of 4-25° C.

### Intended Use of BD Vacutainer® Urine Tubes for Urinalysis:

• The BD Vacutainer® Plus Conical UA Tubes, 16x100 mm, are provided for automated chemistry dipstick urinalysis and to obtain sediment for examination. One notable feature of the BD Vacutainer® Plus Conical UA Tube, 16x100 mm, is that it fits with the KOVA® petter thereby providing standardization of the microscopic sediment analysis.

The tubes provide a safe method for direct sampling of a urine specimen from the BD Vacutainer® Specimen Collection Cup for routine urinalysis and may be used to store and transport specimens to the laboratory for diagnostic examination.

### Limitations of Urinalysis Tubes:

1. The quantity of specimen drawn varies with altitude, ambient temperature, barometric pressure, tube age, and filling technique.

2. Due to the instability of bilirubin and urobilinogen in urine when exposed to room temperature and light, testing should be performed as soon as possible or specimens should be stored in darkness.

3. The urinalysis tubes that contain no preservative, should be transported without delay to the laboratory for processing or properly refrigerated to prevent erroneous results due to bacterial growth and/or specimen deterioration.[8]

### Equipment Required But Not Supplied for Urine Testing:

1. Equipment for urinalysis, sediment examination, or for general laboratory specimens.

2. Media and supplies for culturing and identification.

3. Gloves, eye protection, coats or gowns, and other appropriate apparel for protection from exposure to bloodborne pathogens or other potentially infectious materials.

### Centrifugation of Urine Tubes for Sediment Analysis:

Recommended Relative Centrifugal Force (RCF) for centrifugation of BD Vacutainer® Tubes with a urine sample is 600 g for 5 minutes in a swing head centrifuge. Always use appropriate centrifuge carriers or inserts for the specific tube size. Use of tubes with cracks, chips, excessive centrifugation speed or inappropriate carriers may cause tube breakage, with release of sample, droplets, or an aerosol into the centrifuge bowl. Release of these potentially hazardous materials can be avoided by using specially designed sealed containers in which tubes are held during centrifugation. Centrifuges should be balanced and properly calibrated. Revolutions per minute (R.P.M.) can be converted to the relative centrifugal force by the following formula:

$$\text{rpm} = \sqrt{\frac{\text{RCF} \times 10^5}{1.12 \times r}} \quad \text{where,}$$

R.C.F. = Relative Centrifugal Force
r = radial distance from center of centrifuge head to bottom of tube in centimeters.

**CAUTION:** Do not exceed recommended speeds. BD Vacutainer® Plus Tubes will withstand up to 10,000 g in a balanced centrifuge.

### Transport of Specimen:

1. Properly label tubes with patient name, i.d., collection date and time and any additional information required by hospital policy.

2. Properly label and package any container used to transport specimen to alternate location in accordance with applicable local, state and federal requirements.

### PRECAUTIONS:

All clinical specimens and devices used to collect or store clinical specimens should be carefully handled and disposed of in accordance with the "Universal Precautions" recommendations of the CDC and CLSI.

### CAUTION:

1. Practice Standard Precautions. Use gloves, gowns, eye protection, other personal protective equipment, and engineering controls to protect from potential exposure to bloodborne pathogens.

2. Handle all biologic samples according to the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples, since they may transmit viral hepatitis, HIV (AIDS), or other infectious diseases.

3. Discard all biologic samples in containers approved for their disposal.

4. When transferring a sample from a syringe, a BD Vacutainer® Blood Transfer Device is recommended. Transferring a sample to a tube using a syringe and needle is not recommended. Additional manipulation of sharps such as hollow bore needles increases the potential for needlestick injuries.

5. Transferring samples from syringe to an evacuated tube using non-sharps devices should be performed with caution for the reasons described below:

- Depressing the syringe plunger during transfer can create a positive pressure, forcefully displacing the stopper and sample, causing splatter and potential exposure.
- Using a syringe for specimen transfer may also cause over or under filling of tubes.
- Evacuated tubes are designed to draw the volume indicated. Filling is complete when vacuum no longer continues to draw, though some tubes may partially fill due to plunger resistance when filled from a syringe. The laboratory should be consulted regarding the use of these samples.

### Storage

Store kit at 4-25° C (39-77° F). Do not use BD Vacutainer® Luer-Lok™ Access Device or Urine Tubes after their expiration dates.

### References:


1. Kass, EH. Asymptomatic Infections of the Urinary Tract. Trans Assoc Amer Phys. 1956;6956-64.
2. Merritt AD, Sanford, JD. Sterile voided urine culture. J Lab Clin Med. 1958;52:463-470.
3. Kass EH. Bacteriuria and the diagnosis of infections of the urinary tract. Arch Intern Med. 1957;100:700-714.
4. Barry AL, et al. Laboratory diagnosis of urinary tract infections. Cumitech 2, Washington, DC: American Society for Microbiology, 1975.
5. O'Grady F, Catell WR. Kinetics of urinary tract infections. Br J Urol. 1966;38:149-151.
6. Hendman R, et al. Effect of delay on culture of urine. J Clin Microbiol. 1976;4:102-103.
7. Jefferson N, et al. Transportation delay and the microbiological quality of clinical specimen. Am J Clin Pathol. 1957;64:689-693.
8. National Committee for Clinical Laboratory Standards, Routine Urinalysis and collection, transportation, and preservation of urine specimens; approved guideline GP16-A, Wayne, PA:NCCLS,1995.


**Symbol Key**

| | | | |
|---|---|---|---|
| --- Do Not Reuse | | IVD --- *In Vitro* Diagnostic Medical Device | |
| REF --- Catalog Number | | STERILE --- Sterile | |
| LOT --- Batch Code | | --- Consult Instructions For Use | |
| --- Use By | | --- Temperature Limitation | |
| --- Manufacturer | | | |
| --- Fragile, Handle With Care | | --- Keep Away From Sunlight | |

℞ Only (USA) 25°C 4°C


Becton, Dickinson and Company, Franklin Lakes, NJ 07417 Made in USA