

BD Vacutainer® Urine Collection Products

Take Better Care of Your Patients, Your Staff, and Your Bottom Line



Helping all people
live healthy lives



Minimizing specimen contamination,
work-flow inefficiencies, and
inappropriate treatment

Critical Issues in Urine Testing

Far-Reaching Consequences for an Important Test

- Urine testing is one of the three most commonly ordered diagnostic screening tests¹
- U.S. hospitals process hundreds of millions of urine samples annually²
- Failure to preserve samples jeopardizes sample quality
- Poor specimen quality may lead to erroneous results that significantly impact patient results
- Leakage and spills associated with open systems pose significant financial, clinical, and safety issues

Clinical Indications for Urine Testing

Disease State	U.S. Prevalence/Incidence
Diabetes ³	23.6 million ⁴
Chronic kidney disease ⁵	26 million ⁶
Acute pyelonephritis ⁷	100,000 hospitalizations/year ⁷
Uncomplicated UTI ^{7,8}	8 million ⁷ ; 479,000 hospitalizations/year ⁹
Catheter-associated UTI ¹⁰	>1 million/year ¹¹

Specimen Contamination, Deterioration, and Overgrowth are Widespread

15%

median U.S. contamination rate, mostly caused by noncompliance with established guidelines¹²

45%

of outpatient samples recollected are not reimbursed¹⁶

2x

bacteria can double every 20 minutes when a urine specimen is unpreserved¹⁵

CLSI and WHO Urinalysis Guidelines^{13,14}

- Processed by the lab within 2 hours of collection
- Kept refrigerated
- Immediately preserved using a specifically designed chemical preservative

CLSI = Clinical and Laboratory Standards Institute
WHO = World Health Organization

Unpreserved samples run the risk of contamination and/or overgrowth, which may lead to:

- Slower reporting of results
- Recollection, re-labeling, and re-testing
- Unnecessary treatment such as antibiotics
- Financial inefficiencies

BD Vacutainer® Urine Collection System Enables Immediate Preservation for Sample Integrity

- Reduces the need for Recollection, Re-Labeling, and Re-Testing
- Ensures Proper Additive Ratio via Vacuum-Drawn Transfer



BD Vacutainer® Plus Urinalysis Preservative Tube

- Proprietary non-mercuric preservatives avoid specimen deterioration and bacterial overgrowth to ensure specimen quality
- Up to 72 hours of stability without refrigeration



BD Vacutainer® Plus C&S Preservative Tube

- Buffered boric acid preservative nontoxic to UTI-associated pathogens¹⁷
- Up to 48 hours of stability without refrigeration

BD meets CLSI Urinalysis Guidelines¹³

- ✓ Leakproof with secure tube closures
- ✓ Single use only
- ✓ Properly labeled
- ✓ Sterile
- ✓ At least 50 mL capacity
- ✓ Specimen preserved if not analyzed within 2 hours of collection

BD Vacutainer® Urine Collection System ensures accuracy by minimizing sample contamination or degradation



Leakage and Spills Disrupt Work-Flow

Leaks and Pour-Off Rates a Major Concern

- Pour offs are common practice¹⁶
- Spills and leaks are widespread¹⁶
- Leakage in pneumatic tubes causing system shutdown occurs 2 to 5 times per year¹⁶
- Specimens that leak are discarded, requiring recollections¹⁶

Costly Work-Flow Impact

Lab Impact	Financial Impact
Inefficient work-flow with significant time/labor costs	Increased labor
	Cost of cleanup

78% of leaked samples are recollected, delaying results and increasing costs¹⁶

5% of all specimens leak in transit to the lab¹⁶

88% of transit-related leaks are from screw-cap containers in open systems¹



BD Vacutainer® Urine Collection System Minimizes Work-Flow Disruptions

Evacuated Transfer Via Straw or Collection Cup for Greater Control

- Eliminates spills from pour offs and leaks as well as associated cleanup costs
- Prevents loss of specimen during transport
- Protects healthcare personnel from exposure to specimens

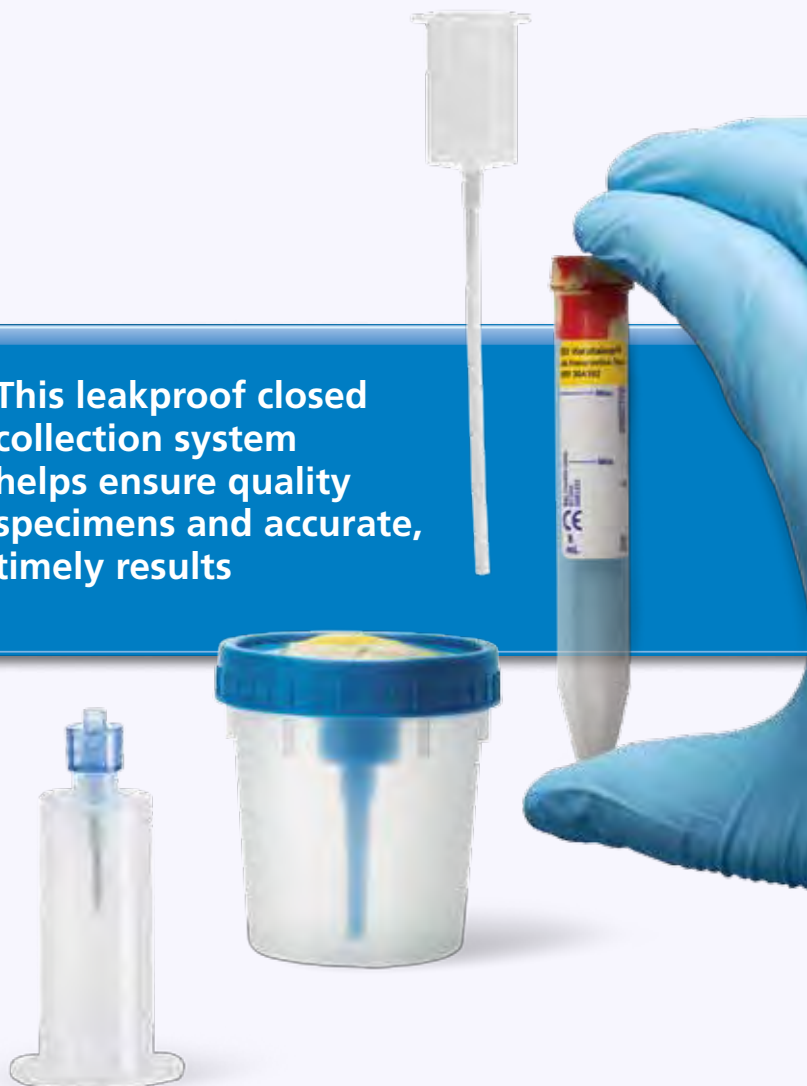
Reduces Recollection^{18,19}

- Reduces number of samples reflexed to microbiology
- Decreases contaminated specimens
- Reduces time lost due to specimen recollection

BD Vacutainer® Luer-Lok™ Access Device

- Enables direct transfer from a Foley catheter to an evacuated tube, therefore ensuring specimen quality
- Eliminates potential hazardous collection via syringe or needle
- Improves workflow and efficiency – No need to split samples or transport cups that are often associated with leakage

This leakproof closed collection system helps ensure quality specimens and accurate, timely results



Limitations of Open Systems Impact Both Results and Costs

Outcomes of Unconfirmed UTI¹⁶

54% treated with pathogen-resistant antibiotic

73% had prolonged inpatient stay

54% of outpatients returned for visit

73% were treated for a nonexistent infection

Process Errors Can Lead to Inappropriate or Unnecessary Treatment

- Up to 70% of urine cultures reflect false-positive results and yield no clinically relevant information^{18,20}
- Closed system users have 3x greater chance of getting accurate UTI testing results than open system users¹⁶
- Inability to confirm UTIs leads to prolonged patient stays and unnecessary treatment for nonexistent infections¹⁶
- Individuals using an antibiotic for UTI may develop resistance²¹

The Bottom Line Impact of Testing Errors

- Treatment for false positives may not be reimbursed
- Repeated urine cultures can prolong inpatient stays by approximately two days at a cost of \$900¹⁶

BD Vacutainer® Urine Collection System Delivers Quality Samples for Quality Results

BD Closed System Helps Ensure Specimen Integrity for Optimal Patient Results¹⁶

- Minimizes potential for false positives by ensuring accuracy with use of proprietary non-mercuric preservatives in UA and C&S tubes
- Reduces potential of patient identification error with labeling at point of collection
- Helps prevent unnecessary antibiotic treatment

Measurable Financial Benefits¹⁶

- Specimen integrity reduces contamination to alleviate workup and recollect costs and potential reimbursement losses
- Quality results ensure accurate diagnoses to reduce unnecessary antibiotic costs and prolonged hospital stays
- Efficient work-flow helps increase productivity and manage time- and labor-related costs

BD Vacutainer® Urine Collection System helps ensure specimen integrity to improve patient results and controls costs



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BD Vacutainer® Urine Collection System Provides Comprehensive Preanalytical Solutions

Enables Immediate Preservation for Sample Integrity

- Reduces specimen deterioration and bacterial overgrowth
- Contains proprietary non-mercuric preservatives to ensure specimen quality
- Ensures proper additive ratio via vacuum-drawn transfer

Minimizes Work-Flow Disruptions

- Offers safe, closed system with evacuated transfer via straw or collection cup
- Eliminates spills from pour offs and leaks, as well as associated cleanup time and costs
- Reduces recollection, re-labeling, and re-testing

Delivers Quality Samples for Quality Results

- Reduces potential patient identification errors with labeling at point of collection
- Minimizes potential for false positives
- Helps ensure specimen integrity to improve patient results and control costs



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