











# Streamline urine collection and testing

With end-to-end BD Urine Solutions



# What if we could standardize urine sampling throughout your network?



-  [Improve outcomes and treatment decisions for patients<sup>1-5</sup>](#) >
-  [Enhance diagnostic accuracy for clinicians<sup>7,8</sup>](#) >
-  [Increase workflow efficiency at your hospital<sup>2,7,9,10</sup>](#) >
-  [Align your practice with global urinalysis guidelines<sup>2,11-14</sup>](#) >
-  [Integrate urine collection solutions end-to-end<sup>15-20</sup>](#) >
-  [Maximize test potential for each specimen<sup>15,21,22</sup>](#) >
-  [Help reduce improper prescriptions and reported CAUTIs<sup>15,16,22,24</sup>](#) >
-  [Accelerate analysis with lab automation and informatics<sup>17,18,25</sup>](#) >
-  [Uncover opportunities to improve performance with PAQC and training](#) >
-  [Improve efficiency with pre-kitted collection options<sup>15,16</sup>](#) >



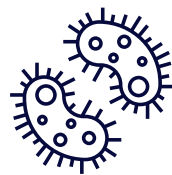
 Improper urine collection can impact your **patients, clinicians and hospital**



# Contaminated urine samples may lead to erroneous results and impact treatment decisions



Urine tests are one of the three most commonly ordered diagnostic screening tests.<sup>1</sup> Improper collection and handling of urine specimens may impact urine sample accuracy.<sup>2</sup> Each error may hurt the patient:



*E. coli* typically doubles every 20 minutes in unpreserved urine,<sup>3,4</sup> **highlighting the urgency** to preserve urine for accurate diagnostic results.



Unpreserved and improperly stored urine samples risk contamination and/or overgrowth, which can lead to **false positives and unnecessary treatment**<sup>1</sup>



In one study, contaminated urine cultures led to **44.3%** of patients being **prescribed the wrong antibiotic**<sup>5</sup>



Unjustified ordering or improper collection of urine can lead to adverse health events such as ***C. difficile* infections**<sup>2</sup>



[See how BD Urine Solutions can reduce urine sample contamination, helping to improve outcomes and treatment decisions for patients.<sup>15,21,22</sup> >](#)



# Poor urine collection processes can impact clinical workflows



Improper urine collection and storage can disrupt workflow and increase turnaround time (TAT). Multiple studies show that urine specimen contamination, deterioration and overgrowth are widespread across laboratories in the U.S.<sup>6</sup> Each subpar urine sample can put additional pressure on clinicians:



Unpreserved and improperly stored samples may require healthcare workers to spend **additional time on recollection, relabeling and retesting**



Lab TAT delayed Emergency Department (ED) treatments **more than 50% of the time<sup>7</sup>**



Leakage, spills and cleanup **disrupt laboratory workflow**



A 10-minute reduction in laboratory test TAT can lead to a **6-minute reduction in ED TAT<sup>8</sup>**

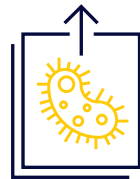


[See how BD Urine Solutions is already helping clinicians reduce urine culture workload and urinalysis TAT.<sup>25</sup> >](#)

# Variations in urine specimen management may also cost the hospital



Each inadvertent complication from an error in urine samples, such as a false positive catheter-associated urinary tract infection (CAUTI) or increased length of stay, is an additional expense to the hospital. Poor urine collection processes can also lead to operational and financial inefficiencies.



Contaminated urine specimens can lead to **over-reporting of CAUTI events**<sup>2</sup>



UTIs are the most common type of healthcare-associated infection (HAI) and may **impact reimbursement**<sup>2,9,10</sup>



Additional tests and medications to treat a CAUTI can cost hospitals **\$876–8,398\***<sup>9</sup>



[See how BD Urine Solutions is enabling facilities to save ED costs and reduce reported CAUTI rates.](#)<sup>7,20,22</sup> >

# Align your practice with the latest global urinalysis guidelines



Studies show that awareness and adherence to best practices in analyzing urine are a problem.<sup>2</sup> Evidence-based guidelines issued by multiple national and global healthcare organizations recommend best practices for each stage of urine specimen management:



*Urine samples must be processed by the lab within two hours of collection and kept refrigerated.*

– World Health Organization<sup>11</sup>



*Urine samples must be immediately preserved using an appropriate chemical preservative.*

– Clinical and Laboratory Sciences Institute<sup>12</sup>



*Adherence to specimen transport and storage must be documented for quality assurance.*

– College of American Pathologists<sup>13</sup>



*Recommend use of a preservative in culture tube; highly recommend the use of a luer-lok device for direct urine sampling from a Foley port.*

– Lippincott Nursing Procedures<sup>14</sup>



[See how BD Urine Solutions may help evaluate performance with BD Preanalytical Quality Checks \(PAQC\) >](#)

Integrate urine collection solutions end to end  
**Collect. Analyze. Report.**





**BD offers a comprehensive portfolio of urine solutions spanning the entire urine specimen management continuum**—so you can choose configurations that are right for all your patients and testing needs. See how we can partner with you at every part of the process:



## Collect

a urine sample, then transfer, preserve and store it<sup>15,16</sup>



## Report

processed results, accurately and on time<sup>18</sup>

## Analyze

the sample to identify pathogens and susceptibility<sup>17-20</sup>



BD Vacutainer® Urine Collection System  
BD SureStep™ Urine Sampling Kit

BD BBL™ CHROMagar™ Orientation  
BD Kiestra™ Urine Culture Application  
BD Phoenix™ M50 Automated Microbiology System  
BD™ Bruker MALDI Biotyper® sirius CA System

BD Kiestra™ Lab Automation System  
BD Synapsys™ Informatics Solution\*



## Optimize

your products, policies and quality of results

Preanalytical quality checks (PAQC)  
Training and education of BD products



\*BD Phoenix™ is not connected to BD Synapsys™ at this time.

# Maximize test potential from each urine specimen



High-quality, preserved samples can help you minimize preanalytical errors and unnecessary cultures due to bacterial contamination. With our closed urine systems, you can maximize diagnostic accuracy and optimize testing for each specimen:



**BD Vacutainer® Complete Urine Collection Kits**, with a collection cup, evacuated tubes and a towelette, are a closed system designed to enable simple and consistent high quality collection<sup>15</sup>



**BD Vacutainer® Urine Collection Cup** provides an integrated transfer straw to ease transfer into evacuated tubes<sup>15</sup>



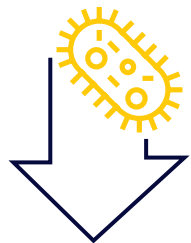
**BD Vacutainer® C&S Preservative Tube** helps you avoid unnecessary recollections due to contaminated samples by allowing sample preservation for up to 48 hours without refrigeration<sup>15</sup>



**BD Vacutainer® Urinalysis Preservative Tube** contains a proprietary formulation allowing sample preservation for up to 72 hours without refrigeration<sup>15</sup>

Non-preserved configuration also available

## Impact at work:



**Reduced contamination rates from 27.6% to 5%<sup>\*,21</sup>**



**More conclusive tests vs open urine collection<sup>^,22</sup>**



**May enhance central processing efficiency with standardized inbound tubes**

\*In a case study, by implementing standardized use of the BD Vacutainer® Urine Collection System and a comprehensive performance improvement plan, urine sample contamination rates across eight hospitals were reduced from 27.6% to 5%.

^BD Vacutainer® Closed Urine Collection System along with standardized preanalytical steps showed a higher rate of conclusive tests compared to an open urine collection system.

# Improve the quality of urine samples with a variety of solutions



Standardizing urine collection means fewer steps, less sample manipulation and reduced risk of contamination. Our analytical solutions enable you to standardize urine sampling, ensuring integrity regardless of where you collect the sample:



**SureStep™ Urine Sampling Kits** provide a step-by-step process for urine sampling from a Foley catheter and can also be used to collect, store and transport urine<sup>16</sup>



**Site-Scrub® IPA Device** enables disinfection of injection ports and female Luer hubs<sup>16</sup>

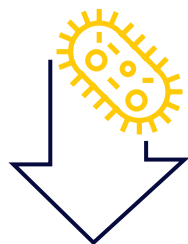


**BD Vacutainer® Luer-Lok™ Access Device** enables direct transfer from Foley catheters to BD Vacutainer® Urine Tubes<sup>16</sup>



**BD Vacutainer® C&S and Urinalysis Tubes** prevent bacterial overgrowth and maintain urine sample integrity for more accurate CAUTI reporting,<sup>15,16</sup> and a discard tube is included for any additional testing

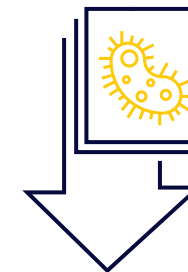
## Impact at work:



**Reduced contamination rates from >20% to <1%\*<sup>22</sup>**



**Reduced exposure for patients and staff**



**Reported CAUTI rates reduced<sup>24</sup>**

\*In a case study, by implementing the BD Vacutainer® Urine Collection System and LEAN process improvements, urine sample contamination rates were reduced from >20% to <1%.

#In a case study, by implementing the BD solution for Foley catheter urine collection, among other interventions, CAUTI rates were reduced.



# Process and report results efficiently with lab automation and informatics



Reduce steps in urine sample processing with fully integrated lab automation solutions that minimize reporting delays and the need for human intervention. Enable staff to focus on more complex tasks with the help of:



**BD BBL™ CHROMagar™ Orientation Plated Media** allows for the differentiation and identification of *Escherichia coli* and *Enterococcus* species without confirmatory testing, so you can report accurate results earlier<sup>17</sup>

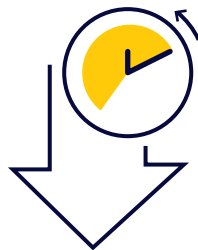


**BD Kiestra™ Urine Culture Application Solution** enables high-resolution standardized plate imaging to deliver laboratory efficiencies and advanced image analysis<sup>18</sup>



**BD Synapsys™ Informatics Solution** provides 24/7 access to digital culture reading and interpretation to improve workflow efficiency and enable on-demand actionable insights<sup>18</sup>

## Impact at work:



ED urinalysis TAT  
reduced by 60%\*,<sup>25</sup>



Lower urine culture workload\*,<sup>25</sup>

\*In a case study, by implementing the BD Vacutainer® Urine Collection System and changing the urine culture ordering process, ED urinalysis TAT was reduced from 30 minutes to 12 minutes, and urine culture workload was reduced.

# Assess your workflows and improve efficiency through standardization



Combine our Preanalytical Quality Checks (PAQC) with training and education to help improve diagnostic accuracy

## BD Preanalytical Quality Checks (PAQC)

Evaluate your preanalytical processes to identify sources of variability, potential for errors and opportunities to improve workflow and quality of results.

### Observe



Collect data and define baseline

- Collection process and instruction
- Specimen handling and labeling
- Transport time and temperature

### Design



Analyze data and develop recommendations

- Solutions to address specific challenges
- Align with clinical best practices and industry guidelines
- Improve areas with the most significant need

### Report



Share insights and discuss proposed solutions

- Collaborative reviews of findings
- Implementation support
- Full-service product support



## Train and educate

Our team can provide process and product suggestions, demonstrate optimized use of our products and potentially develop new product offerings to address unmet clinical and diagnostic needs.



Best practices and industry guidelines



Product training and education programs



Comprehensive performance improvement plans



In addition to the various bulk device and tube options available, BD offers pre-kitted urine collection options designed to enhance efficiency and streamline sample collection and testing:



**Urine Complete Cup Kit** includes a Urine Collection Cup with an integrated transfer device, a Urinalysis Tube,\* Culture & Sensitivity Tube and towelettes for cleansing prior to collection<sup>15</sup>

\*Both preservative and non-preservative tube options available

- BD Vacutainer® Urine Collection Cup with Integrated Transfer Device
- BD Vacutainer® Urine C&S Preservative Tube (4.0 mL)
- BD Vacutainer® Urinalysis Preservative Tube (8.0 mL)  
or BD Vacutainer® Urinalysis No Additive Tube (8.0 mL)
- Castile Soap Towelettes



**BD SureStep™ Urine Sampling Kit** contains a Site-Scrub® IPA Device, a BD Luer-Lok™ Access Device, evacuated urine tubes and step-by-step instructions<sup>16</sup>

- Site-Scrub® IPA Device
- BD Vacutainer® Luer-Lok™ Access Device
- BD Vacutainer® Urine C&S Preservative Tube (4.0 mL)
- BD Vacutainer® Urinalysis Preservative Tube (8.0 mL)
- BD Vacutainer® No Additive (Z) Tube (6.0 mL)



# Let's partner to advance urine sample management

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BD Life Sciences, 1 Becton Drive, Franklin Lakes, NJ 07417-1880, U.S.  
800.638.8663

[bd.com](https://www.bd.com)

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