

Division of Laboratory Medicine

Bacteriology

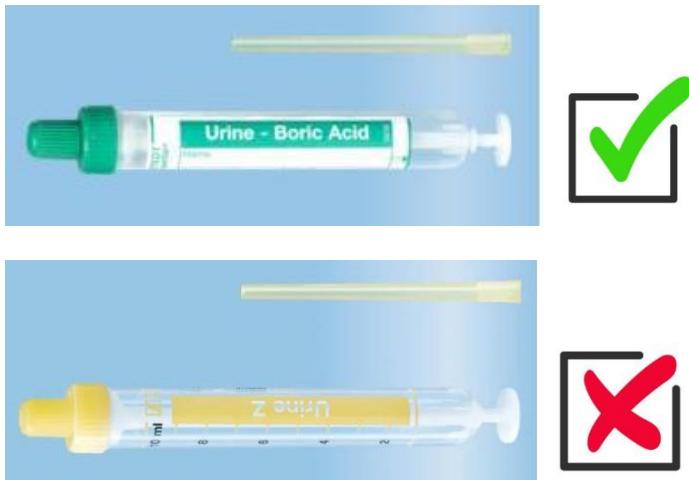
Urines

Urinary tract infection (UTI) results from the presence and multiplication of microorganisms in one or more structures of the urinary tract with associated tissue invasion. This can give rise to a wide variety of clinical syndromes. These include acute and chronic pyelonephritis (kidney and renal pelvis), cystitis (bladder), urethritis (urethra), epididymitis (epididymis) and prostatitis (prostate gland). Infection may spread to surrounding tissues (eg perinephric abscess) or to the bloodstream.

The microscopical presence of White Blood Cells (WBC) is quantified and correlated to bacterial growth to diagnose a urinary tract infection. The presence of Red Blood Cells (RBC) and epithelial cells is also reported.

General information

Collection container (including preservatives): Collect specimens in 10 ml Monovette containing Boric Acid and transport specimens in sealed plastic bags.



Specimens not received in 10 ml Monovette containing Boric Acid will be rejected.

Exceptions will be made for paediatric urine samples on babies up to 3 months, where the volume is less than 10ml. A universal container will be accepted for these patients.



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Specimen type: Urine: Clean catch urine (CCU) Mid stream urine (MSU) Supra pubic aspirate (SPA) Bladder urine & Catheter urine

Collection:


Urine Monovette® with Boric Acid

Instructions for use

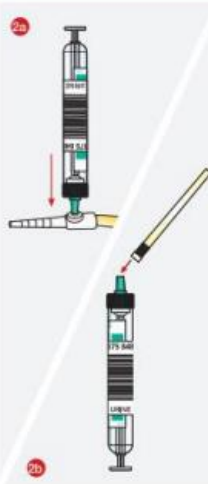
Technical instructions reserved

This document may contain information on products that may not be available in particular countries

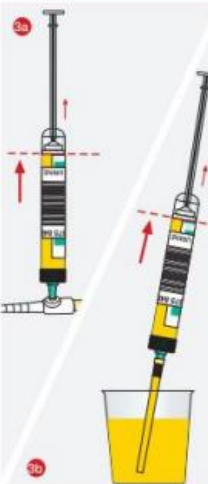
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1 When using a barcode label, attach it along the printed line and/or place it in an exact vertical position. **Remove stopper and keep for later use!**




2a Urine collection from catheter.* **Disinfect the septum in accordance with internal guidelines.** Insert the Luer tip into the septum. Attach aspiration tip.



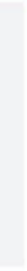
2b Insert the aspiration tip into the container and fill the Urine Monovette® up to the base line.



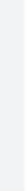
3a Hold the Urine Monovette® in a vertical position and withdraw the piston rod in downward direction until it locks into its base to empty the aspiration tip.



3b



4 Remove the aspiration tip, **break off the piston rod and discard both.** Replace the stopper.



5 Mix well after sample collection (tilt approx. 5 times).

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Before sending to the laboratory urines should be screened in the clinical setting using dipsticks that are able to detect both leucocyte esterase and nitrites. This will give an almost immediate indication as to whether UTI is likely and for the need to culture in all but a few patient groups. There is a strict rejection policy in place for urine samples that are submitted without the relevant information or screening. Urine catheter tips will not be processed. There is no such thing as a routine MSU or CSU. Specimens should be sent only on clinical grounds. MSU and clean catch urines are the most commonly collected specimens and are recommended for routine use.

Suprapubic aspirate (SPA) is seen as the "gold standard" but is usually reserved for clarification of equivocal results from voided urine in infants and small children. Before SPA is attempted it is preferable to use ultrasound guidance to determine the presence of urine in the bladder.

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Specimen transport: Delays and storage at room temperature allow organisms to multiply which generates results that do not reflect the true clinical situation. Where delays in processing are unavoidable, refrigeration at 4°C is essential.

Samples >48 hours old are not suitable for testing and a repeat sample should be collected.

Minimum volume of sample: A minimum volume of 1mL

For Mycobacteria culture collect 3 consecutive early morning urine samples in 200mL containers

Special precautions: Specimens should be transported and processed within 4 hr

Laboratory information

Measurement units: X10⁶/L (WBC/RBC)
Urine culture is quantified (cfu)

Biological reference units: Not applicable

Turnaround time: 30 – 60 mins for cell count if laboratory contacted prior to sending
1-3 working days for culture

Clinical information

Clinical decision points: Not applicable

Factors known to significantly affect the results: Collect specimens before antimicrobial therapy where possible.

(Last updated November 2024)