

NATIONAL STANDARD METHOD

# INVESTIGATION OF URINE

BSOP 41

Issued by Standards Unit, Evaluations and Standards Laboratory  
**Specialist and Reference Microbiology Division**

*Association of Medical Microbiologists*  
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## INVESTIGATION OF URINE

Issue no: 5 Issue date: 28.02.05 Issued by: Standards Unit, Evaluations and Standards Laboratory, Page 1 of 35  
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This SOP should be used in conjunction with the series of other SOPs from the Health Protection Agency

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## 1.0 SAFETY CONSIDERATIONS<sup>108-118</sup>

### 1.1 SPECIMEN COLLECTION

N/A

### 1.2 SPECIMEN TRANSPORT AND STORAGE

Sterile leakproof container in a sealed plastic bag

### 1.3 SPECIMEN PROCESSING

Containment Level 2 unless infection with a Hazard Group 3 organism, for example *Mycobacterium* species, *Salmonella typhi* or *Salmonella paratyphi* A, B & C is suspected on clinical grounds, in which case work should be performed in a microbiological safety cabinet under Containment Level 3 conditions

Laboratory procedures that give rise to infectious aerosols must be conducted in a microbiological safety cabinet, isolator or be otherwise suitably contained

Refer to current guidelines on the safe handling of all organisms documented in this SOP

The above guidance should be supplemented with local COSHH and risk assessments

Compliance with postal and transport regulations is essential

## 2.0 SPECIMEN COLLECTION

### 2.1 OPTIMAL TIME OF SPECIMEN COLLECTION

Before antimicrobial therapy where possible

### 2.2 CORRECT SPECIMEN TYPE AND METHOD OF COLLECTION<sup>4,44</sup>

Boric acid should be used where delays are likely to occur. It should be noted that boric acid may be inhibitory to some organisms<sup>65-67</sup> and may inhibit tests for leucocyte esterase<sup>44,96</sup>.

#### Midstream urine (MSU)

Recommended method for routine use

The first part of voided urine is discarded and without interrupting the flow, approximately 10mL is collected into a sterile container. The remaining urine is discarded. If boric acid preservative is used the container is filled up to the mark in the same manner and the contents mixed well

#### Clean-catch urine

A reasonable alternative to MSU

Thorough periurethral cleaning is recommended. The whole specimen is collected into a sterile container and then an aliquot sent for examination

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Issue no: 5 Issue date: 28.02.05 Issued by: Standards Unit, Evaluations and Standards Laboratory, Page 15 of 35

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