

SOP

**COLLECTION OF MIDSTREAM SAMPLES OF
URINE IN PAEDIATRIC PATIENTS**

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Standard operating procedure (SOP) for the collection of midstream samples of urine in paediatric patients

Issued by

Faculty of Medicine, Uva Wellassa University of Sri Lanka

purpose

To establish a standardized, aseptic, and reliable method for collecting midstream urine samples in children for microbiological and biochemical analysis, ensuring accurate diagnosis of urinary tract infections (UTIs) and minimizing contamination

Scope

Applies to all healthcare personnel, students, and laboratory staff involved in urine sample collection in paediatric patients.

Safety Considerations

- Follow standard precautions (gloves, hand hygiene)
- Treat all urine samples as potentially infectious
- Avoid direct contact with urine
- Dispose of waste as per biohazard protocols
- Clean any spills immediately



Materials and Equipment Required

- Sterile, wide-mouthed, leak-proof urine container
- Sterile cleansing materials (water or saline + gauze)
- Gloves
- Labels and marker

General Principles (Non-negotiable points)

- First morning sample preferred (higher bacterial yield)
- Sample must be midstream, not initial urine
- Strict perineal cleaning is essential
- Sample should be processed within 1 hour

Method Based on Age Group

A. Toilet-Trained Children

Step 1: Preparation

- Explain procedure clearly to child and caregiver
- Wash hands and wear gloves

Step 2: Cleaning

- Girls: Clean front → back (prevents faecal contamination)
- Boys: Retract foreskin if possible and clean glans

Step 3: Collection

- Child begins urinating into the toilet
- Open the lid of the container
- After initial urine passes, collect the midstream portion into a sterile container
- Avoid touching the inside of the container



Step 4: Completion

- Close container immediately
- Label properly

B. Non-Toilet-Trained Children

Clean Catch Method (Preferred)

- Clean genital area thoroughly
- Remove diaper
- Wait for spontaneous voiding
- Collect urine midstream into sterile container

Tips that actually work:

- Feed the child → increases chance of voiding
- Gentle suprapubic tapping or cold stimulation

Clean catch



Labelling

Include:

- Patient name / BHT
- Date and time of collection
- Method of collection (MSU)

Records and Documentation

- Record method of collection (critical)
- Document any difficulty or contamination risk
- Record timing (collection vs analysis)

Documentation: properly filled request form with short clinical history

Transport and Storage

- Send to lab within 1 hour with a properly filled request form
- If delayed → refrigerate at 4°C (max 4 hours)

Post-Procedure Care

- Ensure child is clean and comfortable
- Dispose of materials safely
- Remove gloves and wash hands

Common Errors

- Not cleaning properly → contaminated sample
- Collecting first stream instead of midstream
- Delayed transport
- Using bag sample for culture
- Not documenting collection method

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