



## Biological samples: collection and storage conditions

### Complete urine analysis (chemical - physical - microscopic)

- Preferably use special clean disposable containers (cups and tubes available in pharmacies or at the lab)
- After clearing the first jet, collect an adequate sample midstream (at least 10 mL of urine) at the first morning urination; alternatively, collect the urine 3 to 6 hours after the last urination
- Deliver the sample to the laboratory as soon as possible (in order to avoid dependent morphological changes of the elements of the sediment, growth of bacteria, alkalinization, etc.) and in any case within 6 hours of collection, if stored at room temperature (+15°/+25°C), away from direct sources of light and heat.

### 24 hours urine

- The day before the delivery to the laboratory discard the urine of the first morning urination. Take note of the time and put in a single, clean and dry container all the urine emitted during the next 24 hours, including the urine of the first urination of the following morning
- During the collection, store the container in a cool place or in the refrigerator (+2°/+8°C) and away from direct sunlight
- Hand over all the urine in the laboratory or, alternatively, transfer an aliquot in a jar/clean disposable tube, taking care to indicate the diuresis.

### CTM cytological exam

- Only use special sterile disposable containers (wide-mouth cups, with screw cap available in pharmacies or at the laboratory), containing appropriate fixative (70% ethanol)
- Wash the genitals with water and mild soap, rinse and dry thoroughly
- After clearing the first jet of urine, collect an adequate sample midstream (at least 50 mL of urine) during the second morning urination, directly into the sterile jar containing fixative (70% ethanol)
- Store the container in a cool place or in the refrigerator (+2°/+8°C) and away from direct sunlight throughout the collection period
- Collect three urine samples on three different and consecutive days and send them to the laboratory all together on the same day (the last of the collection)
- Fully complete the acceptance form in all its parts and attach it to the 3 urine samples.

### Microalbuminuria: morning urine

- Preferably use special clean disposable containers (cups and tubes available in pharmacies or at the lab)
- After clearing the first jet, collect an adequate sample of urine (at least 10 mL) at the first morning urination, immediately upon waking and avoiding any physical activity before the collection
- Deliver the sample to the laboratory as soon as possible or store in the refrigerator (+2°/+8°C) for no longer than 24 hours.

### Urine culture: adult patients

- Only use special sterile disposable containers (wide mouth cups with screw cap available in pharmacies or at the lab), possibly containing suitable preservative (eg. Boric acid)
- Carefully wash the genital area with water and mild soap, rinse thoroughly and do not dry out
- Retract the foreskin in males and spread the labia majora in females
- After clearing the first jet, collecting the midstream directly into the container at the first morning urination
- In order to allow the least possible pollution of the sample, the container must remain open for the time strictly necessary for the collection, avoiding touching the inner walls with hands or other and immediately close it airtight and accurately
- Deliver the sample to the laboratory as soon as possible

### Urine culture: pediatric patients

**Warning !** The following mode of collection of the urine in pediatric patients should be performed with caution, in order to avoid contamination of the sample with fecal and/or perineal material.

- Place the child in an upright position
- Wash your hands with soap and water, rinse and dry thoroughly (if possible, wear sterile gloves)
- Wash the external the child's genitalia and perineum with water and mild soap, rinse thoroughly and do not dry
- Open the sterile bag and avoid touching the inside, then apply it to the perineum and the pubic region and appropriately stimulate baby urination (if the child had difficulty urinating remove the bag every 20 minutes and repeat the positioning procedure until the sample collection)
- Collect the urine and close the bag using the special adhesive tab
- Place the bag in an upright position in a sterile container without pouring the urine and close the container carefully by screwing the cap
- Deliver the sample to the laboratory as soon as possible

### Urine culture: patients with permanent catheter

**Warning !** Do not disconnect the catheter to collecting the urine.

- If possible, avoid collecting the feces directly into the toilet or transport container
- Wash your hands with soap and water, rinse and dry thoroughly before wearing the sterile gloves
- Clamp the catheter immediately downstream of the collection device
- Disinfect the catheter device designed for the taking
- Draw the amount of urine required with a 10 ml syringe, dispense it into the sterile container, taking care to close it with its cap immediately after
- Remove the clamp from the catheter
- Deliver the sample to the laboratory as soon as possible

### **Feces: culture and immunochemical tests**

**Warning !** Do not add preservatives to the collection container.

The methods of collection and storage of fecal samples are applied in case of coproculture, detection of antigens and toxins (*Helicobacter pylori* and Rotavirus / Adenovirus, *Clostridium difficile*, etc.), immunochemical assays (calprotectin, lactoferrin,  $\beta$ 2defensina, pancreatic elastase, etc.).

- If possible, avoid collecting the feces directly into the toilet or into the container for transport
- For transport, use the appropriate sterile plastic container with the collection scoop
- Take a quantity of fecal material equal to a nut (or an equivalent amount if the feces are liquid)
- In the case more samples were requested for analysis, perform the collection of samples on different and consecutive days
- Hand in the laboratory each sample as soon as possible; optionally store in a refrigerator (+2°/+8°C) for no more than 24 hours for the cultivation tests, and for no longer than 5 days for the immunochemical tests.

### **Feces: search intestinal parasites**

- If possible, avoid collecting the feces directly into the toilet or into container for transport
- For transport, use the appropriate sterile plastic container with the collection scoop, optionally containing suitable preservative (eg. Formalin)
- Take a quantity of fecal material equal to a nut (or an equivalent amount if the feces are liquid)
- In the case more samples were requested for analysis, perform the collection of samples on different and consecutive days
- Hand in the laboratory each sample as soon as possible; optionally store in a refrigerator (+2°/+8°C) for no more than 24 hours or at room temperature (+15°/+25°C) and away from direct sources of light and heat if containing suitable preservative. Only in the event that containers are used with a preservative it is possible to send them all together to the laboratory on the same day (the last of the collection).

### **Feces: search occult blood (FOB)**

**Warning !** Do not collect feces in the presence of bleeding hemorrhoids and/or menstrual flow. It is not necessary to follow a diet without meat. Avoid the use of the toothbrush the evening before the collection in order to prevent any possible bleeding of the gums.

- Apply the same collection methods indicated in the previous paragraph in the event that you use the appropriate sterile container of plastic with the collection scoop

### Scotch Test

- Place the transparent adhesive tape (3/4 cm long) on the orifice anal , before waking up, for some minute; avoid the use of talco powder and creams during the collection
- Apply then the transparent adhesive tape on a glass slide in the longitudinal direction, avoiding the formation of folds and/or air bubbles
- If more samples need to be analyzed, perform the collection of samples in different and consecutive days
- Hand in the laboratory each sample as soon as possible; possibly keep dry, at room temperature (+ 15°/+ 25°C) and away from direct sources of light and heat for no more than 24 hours.

### Sputum

- Sputum should be collected in the morning in a wide-mouth sterile container (available in pharmacies or at the laboratory)
- Rinse your mouth with some gargles performed with water
- Perform a deep sputum and collect sputum directly into the container
- Close the container tightly and correctly; take it right away to the laboratory
- In patients unable to collect sputum for failure of the cough reflex or due to lack of bronchial secretion, it is recommended the administration of mucolytics or expectorants during the two days preceding the examination.

### Spermioculture

- Prior to the collection, the patient must observe a period of abstinence from 2 to 7 days and sexual relationships and antibiotic therapies must have ceased for at least one week
- Wash the genital area carefully with water and mild soap, rinse and dry thoroughly
- The sample should be collected with care and in a total way (avoid losing the first drops and also collect the latest by gentle squeezing of the urethra, a flaccid penis back, starting with the finger from behind the scrotum and following all the urethra to the urinary meatus) in a sterile container and sent immediately to the laboratory
- In case of late sperm sowing, this can be stored in the refrigerator (+2°/+8°C) for no longer than 24 hours.

<b>PREPARAZIONE</b>	P.Tripodi	01/11/2018								
<b>APPROVAZIONE</b>	M. Rollone	01/11/2018	01/11/2019	01/11/2020	01/11/2021	N. Schifino	04/04/2022	04/04/2023	31/08/2024	
<b>RESPONSABILITA'</b>	P.Tripodi	01/11/2018	01/11/2019	01/11/2020	01/11/2021		04/04/2022	04/04/2023	31/08/2024	

