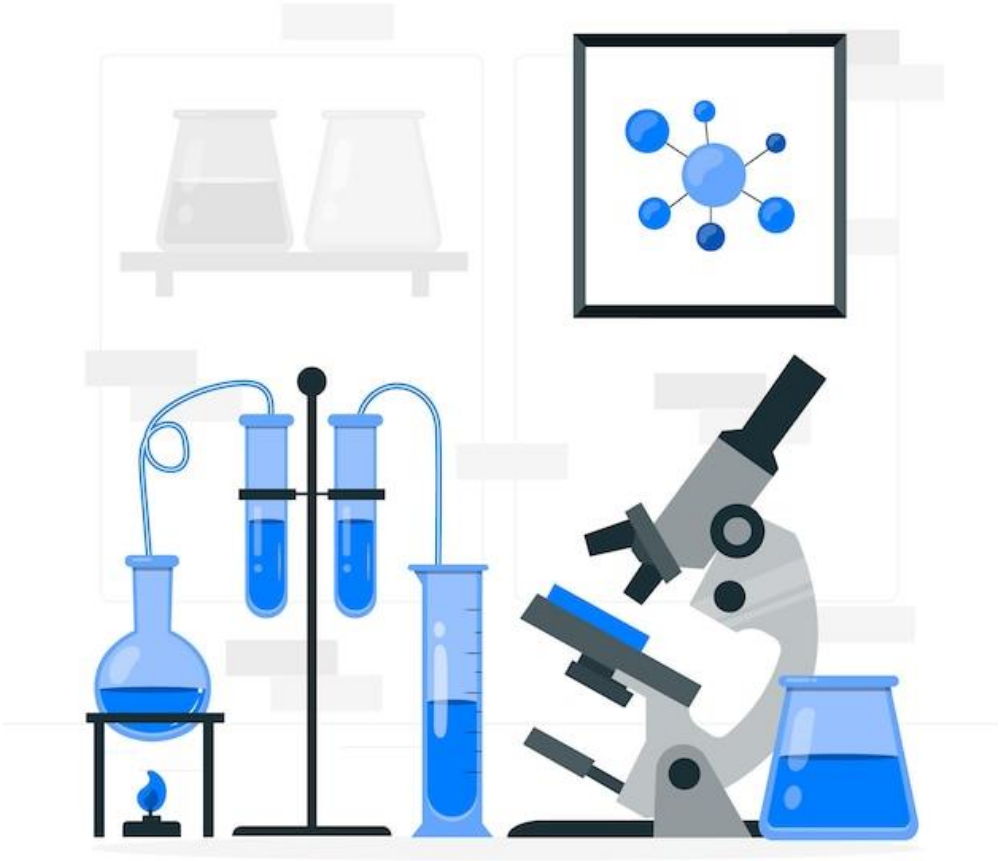
Sistema Socio Sanitario
Regione Lombardia
ASST Cremona



SERVICE CHARTER
ANALYSIS LABORATORY – OGLIO PO HOSPITAL

By: Dr. Mangoni Paolo – Biologist Manager

SUMMARY

INTRODUCTION

The Oglio Po Analysis Laboratory provides its services throughout the entire ASST of Cremona (covering the hospital facilities of Cremona and Vicomoscano), as well as in the Cremona and Casalasco territories. It actively cooperates with the Cremona Analysis Laboratory, dividing the more specialized branches of diagnostics between them. Specifically, it includes the following departments: Allergology, Electrophoresis and Specific Proteins, and Pathological Hemoglobins. The Analysis Laboratory is a Simple Structure with Departmental Relevance, part of the Laboratory Medicine Department of ASST Cremona. It is located on the first floor of the Oglio Po Hospital Facility. Our primary goal is to provide high-quality assistance, ensuring competence, professionalism, and a human-centered approach from all laboratory staff. To achieve the established quality objectives, our work is based on a teamwork and collaboration concept, where all participants in the process are involved, contributing their expertise toward achieving a shared objective.

QUALITY

The increase in laboratory tests in recent years has required large healthcare facilities to adopt daily quality checks, essential for ensuring compliance with organizational and analytical procedures. This has led to an expansion of the analytical quality concept into "Global Quality", emphasizing not only the quality of services but also the continuous professional development of healthcare operators (E.C.M. - Continuing Medical Education). The service collaborates with the Laboratory Medicine Department of ASST Cremona, of which it is an integral part. Additionally, the service is directly involved in the CRS – SISS project, aimed at digitalizing the Regional Health Service, allowing access to information systems across the entire Italian Public Administration. The laboratory is certified under UNI EN ISO 9001:2015 and undergoes regular internal and external inspections to ensure:

- Technical quality of services
- Organizational efficiency
- Safety for operators and users
- Professional development of staff
- User rights and satisfaction

The Analysis Laboratory carries out daily internal quality control (C.Q.I.), assessing analytical precision, and participates in external quality assessment (V.E.Q.), verifying accuracy and correctness, in accordance with Regional Regulation DDUO 19/12/00 No. 32856. The data collected from quality controls are processed digitally, evaluated internally, and sent to the appropriate organizations for comparison with laboratories nationwide. This generates quality verification reports based on different instruments and methodologies. Both internal and external quality assessments are available for review, upon appointment, to those interested. The Laboratory’s commitment is to constantly improve analytical performance in terms of accuracy, precision, sensitivity, and specificity, through increased automation and procedural optimization. This is achieved while ensuring significant investments in cutting-edge technology. Additionally, the laboratory staff regularly attend training courses to accumulate the required continuing education credits, in accordance with the regulations set by their respective professional associations.

Oglio Po Analysis Laboratory

(Via Staffolo 51 - 26040 Vicomoscano - Casalmaggiore - CR)

Acting Director: Dr. Paolo Mangoni

Reference Internal Contact Numbers

Hospital Switchboard: Tel. 0375-2811

Laboratory Secretariat (Monday to Friday, 11:00 AM – 3:00 PM, excluding Saturdays and holidays)

Tel. 0375-281482

Fax 0375-281481

E-mail: segreteria.laboratorio.poop@asst-cremona.it

Hemostasis and Thrombosis Center (Monday to Friday, 11:00 AM – 3:00 PM, excluding Saturdays and holidays)

Tel. 0375-281632

Cremona Analysis Laboratory

(V.le Concordia 1, Cremona)

Director: Dr. Sophie Testa

Reference Internal Contact Numbers

Hospital Switchboard: Tel. 0372-405111

Laboratory Secretariat:

Tel. 0372-405452

Fax: 0372-405458

E-mail: laboratorio.poc@asst-cremona.it

Hemostasis and Thrombosis Center: Tel. 0372-405666

Pathology Secretariat: Tel. 0372-405477

Transfusion Center Secretariat: Tel. 0372-405462

Cytogenetics Laboratory Secretariat: Tel. 0372-405217

SAMPLE COLLECTION POINTS - Oglio Po Laboratory

For special or complex tests (such as sperm analysis, glucose tolerance tests, hematologic and HLA typing, genetic testing, metal level measurements, etc.), patients should contact the laboratory's Secretariat in advance.

Important: Some specific tests can only be performed at the Oglio Po Sample Collection Point (see page 7).

The ticket payment is required at the time of registration. Test results can be accessed via the Electronic Health Record or at the CUP service desks. If the patient is unable to collect the results in person, a written authorization (delegation) is required.

On the day of blood tests, patients must:

- Fast for at least 8 hours before the test.
- Bring the referral from a General Practitioner or Specialist.
- Carry their Health Card (Tessera Sanitaria).

Sample Collection Points

Oglio Po Hospital Sample Collection Point
- Location: Oglio Po Outpatient Clinics
- Opening Hours**:** Monday to Saturday (excluding holidays), 7:30 AM – 9:30 AM
- No appointment required

Casalmaggiore Sample Collection Point
- Location: Via Petofi
- Opening Hours: Monday to Saturday (excluding holidays), 7:30 AM – 10:30 AM
- Walk-in Access or Scheduled Appointment (tel. 0375203401)

Viadana Sample Collection Point
- Location: Largo De Gasperi
- **Sample Collection without Appointment:**
  Monday to Friday: 9:30 AM – 10:00 AM
  Saturday: 9:00 AM – 9:30 AM
- **Sample Collection with Appointment (Tel. 0376-435533):**
  Monday, Wednesday, and Friday: 7:30 AM – 9:30 AM. Tuesday and Thursday: 8:30 AM – 9:30 AM (7:30 AM – 8:30 AM reserved for CAD Mantova sample collections); Saturday: 7:40 AM – 8:55 AM.
- **Biological Sample Delivery without Appointment**:
  Monday to Friday: 10:30 AM – 11:30 AM
- **Report Pickup:**
  Monday to Friday: 2:30 PM – 4:30 PM

Other Sample Collection Services
For additional sample collection services, please contact the relevant facilities for appointments.
Cingia de Botti Sample Collection
- Location: Germani Hospital
- Opening Hours: Thursday, 7:30 AM – 8:30 AM
- **Home sample collection: Monday and Wednesday**

Dosolo Sample Collection
- Location: Municipal Facilities
- Opening Hours: Thursday, 7:30 AM – 9:30 AM

Scandolara Ravara and Motta Baluffi Sample Collection
- Location: Municipal Facilities
- Opening Hours: 1st and 3rd Monday of the month, from 7:00 AM *(currently suspended)*

EXTERNAL SAMPLE COLLECTIONS

At most sample collection sites, requested tests are uploaded into the Laboratory Information System (L.I.S.) using terminals connected to the laboratory's central server. Once entered into the system, labels are generated to identify blood sample tubes and other necessary biological containers. These labels include the request number, barcode, patient details, and the type of tube or container to be used.
For home sample collection, scheduling is required by submitting the physician's request at least 2 days before the planned collection date. The request must be delivered to a sample collection site or the laboratory's secretariat. It is mandatory to specify the exact date of the collection. If any issues arise preventing collection on the scheduled date, patients must notify the Laboratory Secretariat. Labels will be available for pickup the day after the request is submitted at the same site.
Unscheduled home sample collections are accepted only if properly identified with the patient's full name and date of birth.

Appointments & Sample Delivery

- Routine blood chemistry tests require an appointment.
- Biological sample deliveries (urine, stool, etc.) do not require an appointment at the Oglio Po, Casalmaggiore, and Viadana sample collection points. Patients must bring properly collected samples in appropriate containers, either purchased at a pharmacy or provided by the laboratory, and ensure they are securely closed (*for collection instructions, see page 9*).
- For special and complex tests (*e.g., sperm analysis, glucose tolerance tests, hematologic and HLA typing, genetic testing, metal level measurements, etc.*), patients must schedule an appointment in advance with the Laboratory Secretariat (Tel. 0375-281482).

Patient Requirements

Patients must arrive at the sample collection site:

- FASTING for at least 8 hours
- On the scheduled date and time
- With a valid medical referral and health card

Anticoagulant Therapy Management

At the FCSA Surveillance Center associated with the Oglio Po Laboratory, patients can receive:

- Oral Anticoagulant Therapy (T.A.O.) prescriptions
- Monitoring for Direct Oral Anticoagulant (D.O.A.) therapies

This service is available for patients who provide blood samples at any of the sample collection points or through home collection.

For information and before starting therapy, please contact the Hemostasis Center at Tel. 0375-281632 during the following hours:

- 8:30 AM – 11:30 AM
- 2:30 PM – 3:30 PM
- Monday to Friday

INTERNAL ACTIVITIES

Routine internal sample collections are accepted in the laboratory Monday to Saturday, from 7:30 AM to 9:30 AM. Urgent samples are accepted 24/7, including holidays. On Sundays and public holidays, only urgent tests are performed.
The hospital units are connected online with the Analysis Laboratory, so all requested tests are entered into the Laboratory Information System (L.I.S.) directly by the respective department (U.O. - Unità Operativa). Once validated by the laboratory, results are available on department terminals and can be printed after digital signature approval.
The turnaround time for urgent test requests is specified in protocol MTP D602 020, generally ranging from 30 to 120 minutes, depending on the type of test. However, times may vary in cases of high workload, analytical issues, or IT malfunctions. Blood gas analysis can be performed immediately upon sample delivery, provided workload conditions allow it.

FOR HIGH-PRIORITY REQUESTS, PLEASE INFORM THE DESIGNATED TECHNICIAN.

INTERNAL SAMPLE COLLECTION PROCEDURE

When a department registers a patient in the L.I.S., including all necessary identification data (name, surname, date of birth, hospital ID number, and health card number), a request number is automatically generated.
For each request, labels with barcodes are printed to identify all blood tubes and biological sample containers. Each label includes: Patient's details, department of origin, type of test, type of tube/container required.

Emergency Protocol (System Malfunction)

In case of system failure or malfunction, test requests must be submitted using "Routine" and "Urgent" paper forms, correctly filled out. The patient's full name and date of birth must be clearly indicated on the request forms and sample labels. The forms also specify which type of tube to use for each test.

Labels on test tubes must be applied vertically, aligned with the upper edge of the tube.

If both routine and urgent tests are requested for the same patient, they must be registered separately with different request numbers.
There must be an exact match between the tests requested and the samples provided.
Urine tests and other biological sample analyses should only be requested if the samples are available.
All test tubes and containers must be properly sealed and clean, placed in hermetically sealed transport containers, organized by patient.

Additional Notes

The laboratory does not accept verbal requests to add tests to previously collected samples. In such cases, a new digital request must be submitted along with a new sample.
Exception:
For pediatric patients (children under 6 years old) or difficult blood draws, additional tests may be exceptionally requested using an existing sample, provided a new digital request is submitted.

Internal Sample Transport

- Monday to Friday (7:00 AM – 9:30 AM): A designated staff member collects samples from the hospital departments and delivers them to the laboratory.
- After 9:30 AM, on Saturdays, Sundays, and public holidays, the department is responsible for delivering the samples to the laboratory.

SPECIAL WARNINGS FOR USERS

BLLOD SAMPLES THAT ARE TAKEN EXCLUSIVELY AT THE OGLIO PO SAMPLE COLLECTION POINT

- ALDOSTERONE and/or RENIN (supine and upright), PROLACTIN CURVE – These tests are performed only at the Oglio Po sample collection point.
- GLUCOSE and INSULIN TOLERANCE CURVES – When booking, patients must inform the operator that these specific tests are required. These tests are performed only at Oglio Po.
- GLUCOSE TOLERANCE TESTS DURING PREGNANCY are performed between the 24th and 28th week of gestation.
- ARTERIAL OR VENOUS BLOOD GAS ANALYSIS, IONIZED CALCIUM, CARBOXYHEMOGLOBIN – Preferably performed at Oglio Po.
- CAPILLARY BLOOD GAS ANALYSIS (bicarbonates) is performed exclusively at Oglio Po in the laboratory.
- QUANTIFERON TEST – Performed only at Oglio Po.
- MALE URETHRAL SWABS – Performed exclusively at Oglio Po.
- The patient must refrain from urination for at least 3-4 hours.
- Upon arrival, patients should immediately notify the staff at the sample collection point without waiting for their turn.
- FEMALE VAGINAL, CERVICAL, AND URETHRAL SWABS – Performed at the Gynecology Department of Oglio Po Hospital, and in specific cases, at the Viadana Family Health Center.
- The patient must first check in at the sample collection point, where the test will be registered, and receive labels before proceeding to the Gynecology Unit for the examination.
- CRYOGLOBULINS, COLD AGGLUTININS, COAGULATION GENE MUTATIONS, FACTOR VIII COAGULATION – Performed exclusively at Oglio Po.

TESTS REQUIRING DIRECT APPOINTMENT WITH THE LABORATORY

- HLA and HEMATOLOGICAL TYPING – Performed by appointment only, to be scheduled with the Oglio Po Laboratory Secretariat.
- GENETIC TESTING – Patients must schedule an appointment with the Laboratory Secretariat.
  These tests must be prescribed by a specialist physician and must include a signed informed consent form completed by both the requesting physician and the patient.
- METALS (ALUMINUM, CADMIUM, CHROMIUM, MERCURY, NICKEL, LEAD, SELENIUM, ZINC) & OCCUPATIONAL MEDICINE SCREENINGS – Performed by appointment only, to be arranged with the Laboratory Secretariat.
  On the scheduled date, patients must arrive by 8:00 AM and check in at the reception desk.

PATHOLOGY TESTS

- CYTOLOGICAL URINE TEST – This test is performed on three morning urine samples (second voiding) collected on three consecutive days.
  Patients must first visit the Analysis Laboratory (during opening hours) to collect the appropriate containers with preservative and the necessary forms.
  Instructions for sample collection will be provided.

Once collected, samples can be delivered to any of the sample collection points, along with the completed medical request form and referral prescription.

- CYTOLOGICAL TESTS ON VARIOUS LIQUIDS – Patients must first visit the Analysis Laboratory (during opening hours) to collect the necessary forms, collection instructions, and containers:
  For various bodily fluids: Use a container without preservative, which must be stored in the refrigerator until delivery.
  For sputum samples: Use a container with preservative.
  Once collected, samples can be delivered to any of the sample collection points, accompanied by the completed medical request form and referral prescription.

- HISTOLOGICAL TESTS – Specimens must be preserved in 10% buffered formalin (pH 7) and sent along with the appropriate documentation.

PROCEDURES FOR COLLECTING BIOLOGICAL MATERIALS URINE

URINE EXTEMPORANEOUS MORNING COLLECTION

In test tube:
COMPLETE URINE EXAM – CALCIUM* – URIC ACID* – CHLORINE* – CREATININE* – PHOSPHORUS* – SODIUM* - POTASSIUM* – MAGNESIUM*

In jar:
URINE ELECTROPHORESIS* – URINE IMMUNOFIXATION (INCLUDING P. BENCE JONES)* – FREE K AND λ DOSAGE+ - PREGNANCY TEST – AMYLASURIA - - MICROALBUMINURIA - NGAL - PHENYLGLYOXYLIC ACID** - HIPPURIC ACID** - METHYL HIPPURIC ACID** - MANDELIC ACID**
* They can also be requested on 24-hour urine (in this case follow the relevant instructions).
** Collection to be performed at the end of work shift or exposure.

Collect the first urine of the morning or at least 3 hours after the last urination, before breakfast and before any type of physical activity.
Avoid collecting durino the menstrual cycle, after taking fruit juices, vitamin C and, if possible, diuretics.
For metal detection and/or specific occupational medicine investigations, collect preferably at the end of the work shift.

Required:
• A clean container for collecting urine (for example, a plastic cup);
• A test tube with a cap for a complete urine test and/or a jar that is not necessarily sterile for other tests. The containers are available free of charge at the Collection Centers, the Analysis Laboratory or can be purchased at the pharmacy.

Sample collection:
• Wash your hands and external genitals thoroughly with soap and water (do not use disinfectants or intimate hygiene products);
• Rinse thoroughly and dry with a clean towel;
• Uncover the glans (for men) or spread the labia of the vulva with your fingers (for women), discard the first stream of urine and collect the second part (midstream) of the urine in the clean container. Transfer the urine into the test tube for complete urine analysis or into the jar for other tests. Close the containers carefully and deliver to the collection points or to the laboratory at the established times.
N.B. The test tube must be filled to three-quarters of its volume.

Warning: for small children unable to collect midstream urine, see the collection method “URINE FROM A BAG” below (section microbiological tests on urine). If a complete urine analysis + urine culture is required, do not transfer the urine collected in the bag but deliver the bag containing urine enclosed in a sterile container. The laboratory staff will be responsible for separating the sample while maintaining sterile conditions.

24-HOUR URINE COLLECTION

Tests:

Creatinine Clearance – Urea Nitrogen – Calcium – Sodium* – Chloride* – Magnesium* – Phosphorus* – Potassium* – Uric Acid* – Oxalate (urine is acidified upon arrival at the laboratory) – Citrate – Cortisol – Aldosterone – Urine Electrophoresis* – Urine Immunofixation (including Bence Jones Protein)* – Free Kappa & Lambda Light Chains*
(**These tests can also be performed on 24-hour urine samples. If so, follow the specific collection instructions.*)

Required Materials:
- Graduated container (2 liters) – Must be thoroughly washed with distilled water. Available for purchase at a pharmacy.
- Non-sterile urine collection container – Available for free at the Analysis Laboratory or for purchase at a pharmacy.

Sample Collection Instructions:
1. In the morning, urinate and discard this first sample (it should NOT be included in the collection).
2. Begin collecting all urine throughout the next 24 hours, including the first morning urine of the following day. Use a large graduated plastic container.
3. Measure the total urine volume collected and write the amount on the label of a small container.
4. Mix the urine in the large container, then pour a portion into the small container, filling it halfway.
5. Securely close the container and deliver it to a sample collection point or laboratory within the designated hours.

24-HOUR ACIDIFIED URINE COLLECTION

Tests: Vanillylmandelic Acid (VMA) – 5-Hydroxyindoleacetic Acid (5-HIAA) – Catecholamines – Metanephrines

Patient Preparation:
For 48 hours before and during urine collection, the patient must follow a diet free of:
- Avocado, bananas, kiwi, nuts, coffee, tea, chocolate.
- Any medication suspension (such as acetylsalicylic acid, tricyclic antidepressants, caffeine, clonidine, chlorpromazine, diuretics, catecholamine-containing drugs, felodipine, furosemide, glyceryl trinitrate, histamine, levodopa, pindolol, reserpine) should be discussed with the physician.
- If medications are not discontinued, inform the laboratory of any drugs taken.

Required Materials:
- Graduated container (2 liters) – Container 1
  - Must be thoroughly washed with distilled water.
  - Available for purchase at a pharmacy.
- Non-sterile urine collection container – Container 2
  - Available for free at the Analysis Laboratory or for purchase at a pharmacy.
- Commercial hydrochloric acid (without detergent)
  - For hospital departments: 5N hydrochloric acid (must be requested from the laboratory).

Acidified Urine Collection Procedure:
1. Before starting urine collection, add 4 tablespoons of commercial hydrochloric acid (without detergent) to Container 1.
   - For hospital departments: Add 5 mL of 5N hydrochloric acid per liter of urine.

2. On the first morning, urinate and discard this first sample (it should NOT be included in the collection).
3. Collect all urine over the next 24 hours, including the first morning urine of the following day, in the large graduated container (Container 1).
4. Measure the total volume of collected urine and record the amount on Container 2.
5. After thoroughly mixing the urine in Container 1, transfer approximately 10 mL into Container 2.
6. Important: During the collection period, store the urine container in a refrigerator or a cool place whenever possible.

24-HOUR LIGHT-PROTECTED URINE COLLECTION

Test:

- Urinary Uroporphyrins*
  (*Can also be performed on a single light-protected urine sample.*)

Required Materials:

- If a 24-hour urine sample is required:
  - Graduated container (2 liters) – Container 1, available for purchase at a pharmacy and thoroughly washed with distilled water.
- Urine collection container – Container 2, available for purchase at a pharmacy or free from sample collection points.
- Aluminum foil.

Sample Collection Instructions:

1. Wrap the 24-hour urine collection container (Container 1) in aluminum foil to protect it from light.
2. Store the container in a dark or dimly lit environment.
3. Discard the first morning urine (it should NOT be included in the collection).
4. Collect all urine over the next 24 hours, including the first morning urine of the following day.
5. Measure the total urine volume (using the graduated markings on Container 1) and record the amount on Container 2, labeled with patient's surname and name.
6. Mix the urine in Container 1, then transfer a small portion into a plastic tube, ensuring it remains protected from light (by wrapping it in aluminum foil).
7. Deliver the sample to a collection point or laboratory within the designated hours.
8. Important: Urine can be temporarily collected in a clean container, but it must be immediately transferred to the light-protected container.
9. For accurate results, carefully follow all instructions.

FECAL OCCULT BLOOD TEST (FOBT)

Required Materials:

Use a specific container with preservative solution, available at Sample Collection Centers and the

Analysis Laboratory.

- Before use: Store the unused container at room temperature.

Sample Collection Instructions:

Collect the stool sample on a dry surface, such as:

- A bedpan
- A plastic bag or a sheet of paper placed in a bidet or trash bin
- A bowl

Important Notes:

❌ Do NOT collect the stool sample directly from the toilet.
❌ Do NOT urinate on the stool sample during collection.
❌ Do NOT urinate into the container.

1. Unscrew and remove the cap from the tube.
2. Insert the tip of the sampling stick into multiple areas of the stool sample, rotating and swiping it.
3. Check that the tip of the stick is visibly stained with stool. If not, repeat the process.
4. Insert the sampling stick back into the tube, screw the cap on tightly, and shake the tube.

Important:
If the test requires three samples, collect one sample from three separate bowel movements (*these may be from the same day, but collection on different days is recommended*).

Storage and Submission:

- Before sample collection: Store the tube at room temperature.
- After sample collection: Store it in the refrigerator for a maximum of 6 days.
- Deliver the samples to the laboratory within the designated hours.
- If multiple samples are required (1, 2, or 3), submit them to the laboratory only after collecting all required samples.

Warnings:

⚠ If experiencing diarrhea, hemorrhoidal bleeding, or menstruation, postpone the sample collection.
⚠ If possible, stop taking Vitamin C, aspirin, and other medications that may cause gastrointestinal irritation and bleeding for at least 1–2 days before collection.
✅ No dietary restrictions are required.

CALPROTECTIN AND FECAL ELASTASE TEST

Required Materials:

A leak-proof container with a built-in collection spatula, available for free at the Sample Collection Center or the Laboratory, or purchasable at a pharmacy.

Sample Collection Instructions:
Collect the stool sample on a dry surface, such as:

- A bedpan
- A plastic bag
- A sheet of paper placed in a bidet
- A clean container

Important Notes:

❌ Do NOT collect the stool sample directly from the toilet.
❌ Do NOT allow urine to contaminate the sample.
❌ Do NOT collect the stool directly into the container.

Placing the Sample in the Container:

- Formed stool: Use the spoon attached to the container lid to collect 5-10 grams of stool (about the size of a walnut) and place it in the container.
- Liquid stool: Transfer 5-10 mL into the container (about one-quarter of the container's volume).
- Do NOT overfill the container—samples filled to the brim will not be accepted.
- Securely close the container and deliver it to a sample collection point or laboratory within the designated hours.

Storage:

- The sample can be from the same morning or, if necessary, stored at 4°C (in the refrigerator) for up to 12 hours.

Important:

⚠ Chymotrypsin and fecal elastase tests cannot be performed on liquid stool—the sample must be at least partially formed.

URINARY STONE ANALYSIS

The sample must be delivered dry in a clean container (urine jar) to a sample collection point or the laboratory.

MICROBIOLOGICAL & PARASITOLOGICAL CULTURE TESTS

All culture tests on various biological fluids must be performed on samples collected in sterile containers.

URINE CULTURE (URINOCOLTURA)

Sample Collection Timing:
Collect first-morning urine or after at least 3 hours since the last urination.

Required Materials:

- Wide-mouth sterile urine container, available for free at sample collection points or the laboratory, or purchasable at a pharmacy.
- Yellow-cap microbiology tube, available for free at sample collection points or the laboratory.

Sample Collection Instructions:

1. Wash hands and external genitalia thoroughly with water and soap (*do not use disinfectants or intimate hygiene products*).
2. Rinse well and dry with a clean tissue.
3. Open the sterile container, avoiding touching the inside.

4. Men: Retract the foreskin.
   Women: Separate the labia with fingers to reduce contamination.
5. Discard the first urine stream (*if a complete urinalysis is also required, collect this first stream in a separate container*).
6. Collect the midstream urine directly in the sterile container, filling it halfway.
7. Discard the remaining urine.
8. For microbiology analysis:
   - Dip the yellow-cap swab sponge into the collected urine for 5 seconds.
   - Reinsert the swab into its tube while maintaining sterility.
   - Break the swab stick and close the tube.
9. Close the urine container immediately.

Storage:

- The sample can be stored at 4°C (in the refrigerator) for up to 12 hours before submission.

URINE CULTURE – MYCOBACTERIA – LEGIONELLA ANTIGEN – PNEUMOCOCCUS ANTIGEN

Sample Collection Timing:
Collect first-morning urine or after at least 3 hours since the last urination.

Required Materials:

- Wide-mouth sterile urine container, available for free at the laboratory or purchasable at a pharmacy.

Sample Collection Instructions:

1. Wash hands and external genitalia thoroughly with water and soap (*do not use disinfectants or intimate hygiene products*).
2. Rinse well and dry with a clean tissue.
3. Open the sterile container, avoiding touching the inside.
4. Men: Retract the foreskin.
   Women: Separate the labia with fingers to reduce contamination.
5. Discard the first urine stream (*if a complete urinalysis is also required, collect this first stream in a separate container*).
6. Collect the midstream urine directly in the sterile container, filling it halfway.
7. Discard the remaining urine.
8. Immediately close the container, carefully screwing on the lid while avoiding contact with the inside.

Storage:

- The sample can be stored at 4°C (in the refrigerator) for up to 24 hours before submission.

URINE COLLECTION USING A PEDIATRIC BAG

(*For infants and young children unable to provide a midstream urine sample.*)

Required Materials:

- Pediatric urine collection bag
- Wide-mouth screw-cap container, available for free at the laboratory or purchasable at a pharmacy

Sample Collection Instructions:

1. Wash your hands thoroughly with water and soap, rinse, and dry.
2. Wash the child's external genitalia and perineum with water and soap (*do not use antiseptics or intimate hygiene products*), then rinse and dry with a clean tissue.
3. Open the sterile collection bag carefully, avoiding contact with the inside, and apply it securely to the perineal skin.
4. Hold the child in an upright position (e.g., in your arms).
5. Wait for the child to urinate. If urination does not occur, remove the bag every 30 minutes, repeat the cleaning procedure, and reapply the bag until a sample is collected.
6. Seal the bag using the adhesive strip and place it inside the screw-cap container (*do NOT transfer the urine into the container*).
7. Securely close the container and deliver it to a sample collection point or the laboratory within the designated hours.

Storage:

- The sample can be stored at 4°–8°C (in the refrigerator) for up to 12 hours.

Important Notes:

⚠ If both a complete urinalysis and a urine culture are required, do NOT transfer the urine from the bag. Instead, place the entire sealed bag inside a sterile container.

⚠ The laboratory staff will separate the sample while maintaining sterility.

URINE COLLECTION FOR SCHISTOSOMA HAEMATOBIUM EGG DETECTION

Required Materials:

- Sterile urine collection container, available for free at sample collection points or purchasable at a pharmacy.
- Aluminum foil.

Sample Collection Instructions:

1. Collect the terminal portion of urine (last part of the stream) between 10:00 AM and 2:00 PM (*Schistosoma eggs are more concentrated during this time*).
2. Discard most of the urine into the toilet.
3. Collect at least 10 mL of the terminal portion of urine in the sterile container.
4. Securely close the container and label it with:
    - Patient's full name
    - Date of birth
    - Time of collection
    - Department (if applicable)
5. Wrap the container in aluminum foil to protect the sample from light.

Storage & Delivery:

- Deliver the sample immediately to the laboratory.
- Samples must be examined within one hour of collection and kept protected from light.
- Submit the sample directly to the Oglio Po Analysis Laboratory.

STOOL SAMPLE FOR BACTERIOLOGICAL TESTS

(*Stool Culture – Yersinia – Enteropathogenic E. Coli*)

Required Materials:

- Green-cap microbiology tube with flocked swab, available for free at the Sample Collection Center or the Laboratory.

Sample Collection Instructions:

Collect the stool sample on a dry surface, such as:

- A bedpan
- A plastic bag
- A sheet of paper placed in a bidet
- A clean container

Important Notes:

❌ Do NOT collect the stool sample directly from the toilet.

❌ Do NOT allow urine to contaminate the sample.

❌ Do NOT collect stool directly into the container.

Placing the Sample in the Container:

1. After collecting the stool sample in an appropriate container, use the green-cap swab to take a small sample.
2. Insert the swab completely into the stool, rotating it for a few seconds to absorb material.
    - If present, target areas with blood, mucus, or watery consistency.
3. Place the swab back into the tube and break the stick, leaving the swab inside.
4. Important:
    - Do NOT use the swab as a spoon; rotate it like a probe.
    - Do NOT exceed the "MAX FILL" line on the tube label.
    - If excessive stool is collected, repeat the procedure with a new kit.

Storage:

- Deliver the sample to the laboratory immediately.
- If immediate delivery is not possible, store at 2–8°C (in the refrigerator) for a maximum of 24 hours.

STOOL SAMPLE FOR MYCOBACTERIA – ROTAVIRUS – ADENOVIRUS – NOROVIRUS – CANDIDA

Required Materials:

- Leak-proof container with a built-in collection spatula, available for free at the Sample Collection Center or the Laboratory, or purchasable at a pharmacy.

Sample Collection Instructions:

Collect the stool sample on a dry surface, such as:

- A bedpan
- A plastic bag
- A sheet of paper placed in a bidet
- A clean container

Important Notes:

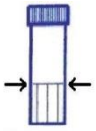
❌ Do NOT collect the stool sample directly from the toilet.

❌ Do NOT allow urine to contaminate the sample.

❌ Do NOT collect stool directly into the container.

Placing the Sample in the Container:

- Formed stool: Use the spoon attached to the container lid to collect 5-10 grams of stool (about the size of a walnut) and place it in the container.
- Liquid stool: Transfer 5-10 mL into the container (about one-quarter of the container's volume).
- Do NOT overfill the container—samples filled to the brim will not be accepted.
- Securely close the container.



Storage:

- The sample can be from the same morning, or if necessary, it can be stored at 4°C (in the refrigerator) for up to 12 hours.

ENTEROBIUS VERMICULARIS – PINWORM TEST

(*Formerly known as Scotch Tape Test*)

Required Materials:

Available at the Analysis Laboratory:

- Screw-cap container (Para-Pak Eco Fix) with preservative
- Three sterile swabs

Sample Collection Instructions:

1. Perform the test in the morning before defecating and before washing.
2. Rub the perianal area thoroughly using a clean cotton swab.
3. Place the swab inside the screw-cap container (*if the swab is too long, break it to fit*).
4. Close the container tightly.
5. Repeat the procedure for three consecutive days, placing all three swabs in the same container.

Storage & Submission:

- Store the container at room temperature, protected from light, and out of children's reach.
- Deliver the container with all three swabs inserted to the laboratory.

STOOL PARASITOLOGY TEST

(*Parasites in Stool – Strongyloides Stercoralis*)

Important Precautions:

A few days before and during stool sample collection:

- Do NOT use laxatives, antidiarrheal medications, antimicrobials, or other interfering substances such as barium, bismuth, or mineral oils.
- Follow a specific diet, avoiding:
    - Legumes and nuts
    - Fruits and vegetables with tough skins (*peaches, apricots, tomatoes, pears, strawberries, figs*)
    - Carrots and bananas

Required Materials:

- Screw-cap container with a built-in collection spatula, available for free at the Laboratory.

Sample Collection Instructions:
Collect the stool sample on a dry surface, such as:

- A bedpan
- A plastic bag
- A sheet of paper placed in a bidet or trash bin

Important Notes:
❌ Do NOT collect the stool sample directly from the toilet.
❌ Do NOT allow urine to contaminate the sample.
❌ Do NOT collect stool directly into the container.

Placing the Sample in the Container:

- Formed stool: Use the spoon attached to the container lid to collect 10-20 grams of stool (about the size of a walnut) and place it in the container (about one-third full).
- Liquid stool: Transfer 10-20 mL into the container (about one-third full).
- Samples that are too small (less than one-third full) or overfilled will NOT be accepted.
- Securely close the container and wash your hands thoroughly

Storage:

- Before delivery, stool samples can be stored at 4-8°C (in the refrigerator) for a maximum of 24 hours.

Important Notes:
⚠ Parasite detection in stool should be performed three times, meaning three samples collected on different (preferably alternating) days.
⚠ This is necessary to ensure adequate sensitivity, as parasite egg excretion in stool is intermittent.
⚠ Each sample must be delivered as fresh as possible and accompanied by a medical request.

CLOSTRIDIUM DIFFICILE TOXIN TEST IN STOOL

- The Clostridium difficile toxin test is performed on a single stool sample (*collected in a stool container available for free at the Laboratory or purchasable at a pharmacy*).
- The sample must be kept on ice and delivered to the laboratory as soon as possible.
- This test is only performed on diarrheal stool samples.

HELICOBACTER PYLORI ANTIGEN TEST IN STOOL

- The Helicobacter pylori stool antigen test has high sensitivity (91%) and specificity (93%), comparable to the breath test.
- This test is used to diagnose H. pylori infection and to confirm eradication after treatment.
- For post-treatment confirmation, the test must be performed at least 4 weeks after completing therapy.

Required Materials:

- Screw-cap container with a built-in collection spatula, available for free at the Laboratory or purchasable at a pharmacy.

Sample Collection:

- Collect the stool sample following the same procedure as for stool culture (*see above*).

Storage:
- The sample can be stored at 4°–8°C (in the refrigerator) for up to 12 hours.

SPUTUM SAMPLE COLLECTION

(*Culture Test – Bacterial Detection – Mycobacteria Detection*)

Sample Collection Timing:
- The sample must be collected in the morning while fasting.
- For culture testing, a single sputum sample is sufficient.
- Do NOT collect multiple respiratory secretions over 24 hours, as this increases the risk of contamination with oral flora.

Required Materials:
- Wide-mouth sterile screw-cap container.

Sample Collection Instructions:
1. Remove any dentures if applicable.
2. Thoroughly clean the oral cavity and rinse with water (*do NOT use mouthwash or toothpaste*).
3. Open the sterile container.
4. Cough deeply and expectorate directly into the container (*avoid collecting saliva*).
5. Close the container tightly, ensuring the lid is securely screwed on.
6. If expectoration is difficult, perform an aerosol treatment with saline solution before collection.

Storage:
- For culture testing: Store in the refrigerator for a maximum of 12 hours.
- For mycobacteria detection: Store in the refrigerator for a maximum of 12 hours.
    - If multiple samples are required on different days, store each daily sample in the refrigerator until delivery.

SPERM CULTURE TEST (SPERMIOCOLTURA)

Pre-Collection Recommendations:
- Abstain from sexual activity (ejaculation or intercourse) for 2 to 3 days before sample collection.

Required Materials:
- Wide-mouth sterile container.

Sample Collection Instructions:
1. Collect the sample at home in the morning.
2. After urinating, thoroughly wash the external genitalia.
3. Collect the semen directly into the sterile container by masturbation.
4. Ensure that the entire ejaculate is collected.

Important Notes:

⚠ Do NOT collect the sample using a condom, as spermicidal substances may interfere with the test.

⚠ Deliver the sample within 2 hours of collection.

⚠ If immediate delivery is not possible, store the sample in the refrigerator for a maximum of 12 hours.

Further Information:

For additional details about laboratory tests, please refer to the attached tables or contact the Laboratory Secretariat during opening hours.

Below are tables summarizing the appropriate containers for various biological samples.

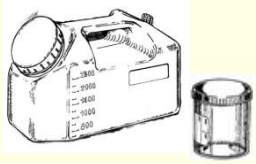
METHODS FOR MICROBIOLOGICAL SAMPLING

Container type	Preservative	Biological material	Analytes examined
 **Urine test tube**	*None*	*URINE FIRST MORNING URINATION*	*URINE CHEMICAL-PHYSICAL TEST*
 **Jar Screw cap**	*None*	MISCELLANEOUS BIOLOGICAL MATERIALS TO BE STORED NON-STERILE	PREGNANCY TEST – AMYLASURIA - URINE ELECTROPHORESIS – URINARY IMF (BENCE JONES) – URINARY FREE K - λ MICROALBUMINURIA - N GAL PHENYLGLYOXYLIC ACID HIPPURIC - ACID METHYL HIPPURIC - ACID MANDELIC - ACID URINE STONE (clean and dry)
	N.B. To be booked at the secretariat Performed in the Occupational Toxicology Lab of Bs	*URINE* (preferably collected at the end of the work shift)	*DELTA AMINO LEVULINIC ACID - PHENOL TRICHLOROACETIC ACID - T,T MUCONIC ACID - ALUMINUM - ANTIMONY - ARSENIC - CADMIUM O - COBALT CHROME - MANGANESE - MERCURY - NICKEL - LEAD COPPER SELENIUM - ZINC - ETC.*
 **Sterile Jar Screw cap**	None For cavity fluids heparinize	*URINE* **MISCELLANEOUS BIOLOGICAL** MATERIALS TO BE PRESERVED STERILE	*(URINE CULTURE)*see below ANTIG. LEGIONELLA RESEARCH ANTIG. PNEUMOCOCCUS RESEARCH ANTIG. - ESCREATED - BRONCHIAL ASPIRATE PLEURAL FLUID, SYNOVIAL FLUID -VARIOUS CAVITARY FLUIDS - WEST NILES (+SERUM TUBE) - SPERM CULTURE - VARIOUS CULTURES - BIOPTIC MATERIALS*
 **Test tube YELLOW cap with sponge**	After collecting the midstream urine in a sterile urine container, dip the swab in for 5 seconds and then reinsert it into its tube, maintaining sterile conditions. Break the swab shaft.	*URINE*	**BACTERIAL URINE COLTURE*

<table>
<tr><td> 
Sterile test tube</td><td>STERILE For cavity fluids heparinize</td><td>LIQUOR
VARIOUS LIQUIDS</td><td>CULTURE ON LIQUOR and OTHER LIQUIDS CHEMICAL EXAMINATION OF LIQUOR MOLECULAR BIOLOGY EXAMINATION OF LIQUOR</td></tr>
<tr><td> 
PINK cap swab</td><td rowspan="3">After sampling, reinsert the swab into its tube and break the rod at the breaking point.

Caution: Make sure not to spill the transport medium.</td><td>Swabs various locations

Screening swabs

(sentinel germs,
neonatal colonization)</td><td rowspan="2">CULTURE TESTS FOR MICROBIOLOGY</td></tr>
<tr><td> 
ORANGE cap swab</td><td>Eye Swabs
Conjunctival Swabs
Ear Swabs
Neonatal Swabs
Cervical Swabs
Urethral Swabs</td></tr>
<tr><td> 
Light BLUE cap swab</td><td>Vaginal-rectal swab for streptococcus gr. B
(S. agalactiae)</td><td>CULTURE TESTS FOR MICROBIOLOGY</td></tr>
<tr><td> 
URINE
24 HOUR
COLLECTION</td><td>None

Acidification is required for some tests</td><td>URINE
SEND A 24-HOUR URINE SAMPLE IN A SCREW-CAP JAR WITH DIURESIS SPECIFIED</td><td>CLEARANCE CREATININE - AZOTURIA
URINE ELECTROLYTES - URICURIA
OXALURIA - CITRATEURIA - CORTISOLURIA ALDOSTERONE

Protected from light (see indications):
UROPORPHYRINS</td></tr>
</table>

			Acidified (see indications): AC. VANILMAND. – AC.5OH INDOL. CATECHOLAMINES - METANEPHRINES
Bottles for BLOOD CULTURES	CULTURE MEDIUM for blood cultures	*BLOOD*	*BLOOD CULTURE* *2 Bottle for aerobics* *2 Bottle for anaerobic* FOLLOW THE COLLECTION PROCEDURE CAREFULLY
 **Container for FECES**	STERILE	*FECES*	MYCOBACTERIA - PARASITES - CANDIDA – Ag. H. PYLORI - ROTAVIRUS - ADENOVIRUS – FECAL ELASTASE - CALPROTECTIN CLOSTRIDIUM DIFFICILE **(on ice and only diarrheal)** EOSINOPHILS –
 **Dedicated container for occult blood**	Specific container	*FECES*	Occult blood
 **GREEN cap swab**	After collecting the stool in a suitable container, take a small amount of sample by inserting the swab completely, rotating it for a few seconds; in particular, dip areas with blood, mucus or water. Reinsert it into its tube and break the swab. Caution: do not use the swab as a spoon, but rotate it like a probe. Do not fill with excessive quantities, not exceeding	*FECES*	*Coproculture* *(Salmonella - Shigella -Campylobacter)* *Yersinia Research* *Fecal fungi Research* *E. coli Research*

	the “MAX FILL” line indicated on the tube label. If the collection is excessive, repeat with a new kit. STOOL		
Sterile empty petri dishes, sterile nail scissors, sterile hair tweezers, sterile scalpel	Remove nails with scissors and scalpels; scrape skin scales with scalpels; remove hair with tweezers	*NAILS* *HAIR* *SKIN SCALES*	*Search for dermatophytes (fungi, fungi) on nail samples, skin scales, hair*
Sterile test tube	Lumbar puncture. Possibly 2 ml per tube	*LIQUOR*	*Liquor culture test* *Liquor physical chemical test* *Liquor test in molecular biology*
Sterile screw cap container	Wet the biopsy with a thin layer of sterile PHYSIOLOGICAL	*BIOPSY*	*Biopsy culture test*