DOWNLOAD PDF COLLECTION AND HANDLING OF LABORATORY SPECIMENS

Chapter 1 : Specimen Handling | Health Care Providers Laboratory, Inc.

It is a foundational principle for any laboratory test procedure that the value of the test is compromised or even negated by using specimens that have not been properly collected, labelled, handled or stored prior to and during the testing process.

The clinical information obtained from a urine specimen is influenced by the collection method, timing and handling. A vast assortment of collection and transport containers for urine specimens are available. Determining which urine collection method and container should be used depends on the type of laboratory test ordered. Types of Collection Laboratory urine specimens are classified by the type of collection conducted or by the collection procedure used to obtain the specimen. Random Specimen This is the specimen most commonly sent to the laboratory for analysis, primarily because it is the easiest to obtain and is readily available. This specimen is usually submitted for urinalysis and microscopic analysis, although it is not the specimen of choice for either of these tests. Pediatric specimens, which routinely undergo chemistry and microscopic analysis, are generally of this type. As the name implies, the random specimen can be collected at any time. Although there are no specific guidelines for how the collection should be conducted, avoiding the introduction of contaminants into the specimen is recommended. This requires explicit instructions to patients so that they do not touch the inside of the cup or cup lid. First Morning Specimen This is the specimen of choice for urinalysis and microscopic analysis, since the urine is generally more concentrated due to the length of time the urine is allowed to remain in the bladder and, therefore, contains relatively higher levels of cellular elements and analytes such as protein, if present. Also called an 8-hour specimen, the first morning specimen is collected when the patient first wakes up in the morning, having emptied the bladder before going to sleep. Proper collection practices and accurate recording of the collection time are important criteria of a first morning specimen. Any urine that is voided from the bladder during the eight-hour collection period should be pooled and refrigerated, so that a true 8-hour specimen is obtained. Midstream Clean Catch Specimen This is the preferred type of specimen for culture and sensitivity testing because of the reduced incidence of cellular and microbial contamination. Patients are required to first cleanse the urethral area with a castile soap towelette. The patient should then void the first portion of the urine stream into the toilet. These first steps significantly reduce the opportunities for contaminants to enter into the urine stream. The urine midstream is then collected into a clean container any excess urine should be voided into the toilet. This method of collection can be conducted at any time of day or night. Timed Collection Specimen Among the most commonly performed tests requiring timed specimens are those measuring creatinine, urine urea nitrogen, glucose, sodium, potassium, or analytes such as catecholamines and hydroxysteroids that are affected by diurnal variations. A timed specimen is collected to measure the concentration of these substances in urine over a specified length of time, usually 8 or 24 hours. In this collection method, the bladder is emptied prior to beginning the timed collection. Then, for the duration of the designated time period, all urine is collected and pooled into a collection container, with the final collection taking place at the very end of that period. The specimen should be refrigerated during the collection period, unless otherwise requested by the physician. Accurate timing is critical to the calculations that are conducted to determine analyte concentrations and ratios. Interpretations based on faulty calculations can result in improper diagnoses or medical treatment. Catheter Collection Specimen This assisted procedure is conducted when a patient is bedridden or cannot urinate independently. The healthcare provider inserts a foley catheter into the bladder through the urethra to collect the urine specimen. Specimens may also be collected through an existing foley catheter. Specimens may be collected directly from a foley into an evacuated tube or transferred from a syringe into a tube or cup. Suprapubic Aspiration Specimen This method is used when a bedridden patient cannot be catheterized or a sterile specimen is required. The urine specimen is collected by needle aspiration through the abdominal wall into the bladder. Pediatric Specimen For infants and small children, a special urine collection bag is adhered to

the skin surrounding the urethral area. Once the collection is completed, the urine is poured into a collection cup or transferred directly into an evacuated tube with a transfer straw. Urine collected from a diaper is not recommended for laboratory testing since contamination from the diaper material may affect test results. Urine Collection Products There are many different manufacturers of urine collection containers. Urine Collection Containers cups for collection and transport Urine collection container cups come in a variety of shapes and sizes with lids that are either snap on or screw on. To protect healthcare personnel from exposure to the specimen and protect the specimen from exposure to contaminants, leak-resistant cups should be utilized. Some urine transport cup closures have special access ports that allow closed-system transfer of urine directly from the collection device to the tube. Urine Collection Containers hour collection Urine collection containers for hour specimens come in a variety of shapes and colors, but most are of 3 liter L capacity1 and are amber colored to protect light-sensitive analytes such as porphyrins and urobilinogen. Closure types vary and some have a port for ease of specimen transfer into a tube. When a preservative is required, it should be added to the collection container before the urine collection begins and warning labels should be placed on the container. If there is more than one acceptable preservative for the analyte being tested, the least hazardous one should be selected. Some common hour preservatives are hydrochloric acid, boric acid, acetic acid and toluene. Urinalysis Tubes Urine specimens are poured directly into urinalysis tubes with screw- or snap-on caps. Additionally, there are evacuated tubes similar to those used in blood collection that are filled by using a straw device, from cups with integrated transfer devices built into their lid, or from direct sampling devices that are used to access catheter sampling ports. Urinalysis tubes come in an array of tube shapes: Conical bottom tubes provide the best sediment collection for microscopic analysis. Some tubes are specially designed to be used with a pipetter that allows for standardized sampling. The tubes you select should be able to withstand centrifugation and, if used with an automated instrument system, should be compatible with the corresponding racks and carriers. Fill volumes of urinalysis tubes usually range from 8 to 15 mL. However, refrigeration or chemical preservation of urine specimens may be utilized if testing or refrigeration within a two-hour window is not possible. A variety of urine preservatives tartaric and boric acids being the most common are available that allow urine to be kept at room temperature while still providing results comparable to those of refrigerated urine. Generally, the length of preservation capacity ranges from 24 to 72 hours. Claims for the length of specific analyte preservation should be obtained from the manufacturer. When a specimen is directly transferred from a collection cup into a preservative tube, it provides a stable environment for the specimen until testing can be conducted and reduces the risk of bacterial overgrowth or specimen decomposition. Non-additive tubes those not containing any chemical preservatives can be used for urinalysis, but must be handled following strict timing and refrigeration guidelines. There is clinical evidence to suggest that non-buffered boric acid may be harmful to certain organisms and that buffered boric acid preservatives can reduce the harmful effects of the preservative on the organisms. Preserved urine specimens can be stored at room temperature until time of testing. Product claims regarding duration of preservative potency should be obtained from the particular manufacturer. Specimen Collection and Transport Guidelines As with any type of laboratory specimen, there are certain criteria that need to be met for proper collection and transportation of urine specimens. This will ensure proper stability of the specimen and more accurate test results. Leak-resistent containers reduce specimen loss and healthcare worker exposure to the specimen while also protecting the specimen from contaminants. It is good practice to use containers that are made of break-resistant plastic, which is safer than glass. The container material should not leach interfering substances into the specimen. Specimen containers should not be reused. The NCCLS guidelines for urine, GPA2, recommend the use of a primary collection container that holds at least 50 mL, has a wide base and an opening of at least 4 cm. The hour containers should hold up to 3L. Transport tubes should be compatible with automated systems and instruments used by the lab. A leak-proof device in this situation is critical. NCCLS recommends the use of an amber colored container for specimens being assayed for light sensitive analytes, such as urobilinogen and porphyrins. Proper labeling should be applied to the collection container or tubes.

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Specimen Preservation Guidelines NCCLS guidelines for microbiological urine testing recommend the use of chemical preservatives if the specimen cannot be processed within 2 hours of collection. Maintaining the correct ratio is especially important when transferring samples into a preservative tube. Use the indicated fill lines on the tube to ensure proper fill. Underfilling the tube will leave a high concentration of preservative in the specimen, while overfilling the tube will overly dilute the preservative. In either case, the function of the preservative may be compromised. An evacuated tube system is designed to achieve proper fill volume to ensure the proper specimen-to-additive ratio and proper preservative function. Evacuated systems also reduce the potential exposure of the healthcare worker to the specimen. Chemical preservatives should be non-mercuric and environmentally friendly. The EPA cites mercuric oxide used in urinalysis preservatives as a source of mercury in medical laboratories. The American Hospital Association and the EPA have issued a Memorandum of Understanding for the "virtual elimination of mercury containing waste from the health care industry waste stream" by the year The EPA website, http: Make sure that the information on the container label and the requisition match. If the collection container is used for transport, the label should be placed on the container and not on the lid, since the lid can be mistakenly placed on a different container. Ensure that the labels used on the containers are adherent under refrigerated conditions. Underfilling or overfilling containers with preservatives may affect specimen-to-additive ratios. Collection Date and Time Include collection time and date on the specimen label. This will confirm that the collection was done correctly. For timed specimens, verify start and stop times of collection. Document the time at which the specimen was received in the laboratory for verification of proper handling and transport after collection. Collection Method The method of collection should be checked when the specimen is received in the laboratory to ensure the type of specimen submitted meets the needs of the test ordered. Proper Preservation Check if there is a chemical preservative present or if the specimen has not been refrigerated for greater than two hours post collection. After accepting the test request, ensure that the method of preservation used is appropriate for the selected test. If the correct preservative was not used the test cannot be conducted. Light Protection Verify that specimens submitted for testing of light-sensitive analytes are collected in containers that protect the specimen from light. This is a glimpse into the complexity of proper urine collection and handling. Since a variety of urine collection procedures and applications exist today, it becomes critical to understand how, when and where things can go wrong.

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Chapter 2 : Specimen Collection and Preparation - Mayo Clinic Laboratories

The specimen collection and handling process can be completed by you and your staff, or by referring your patient to a Quest Diagnostics Patient Service Center. Please contact the laboratory for clarifications, if needed, prior to specimen collection.

To provide guidance for laboratory workers on collecting, transporting and submitting specimens for Ebola virus testing. Scope This guidance document replaces the previously posted document: This guidance is based on input received from numerous hospital and laboratory directors, infectious disease physicians, CDC Ebola response teams, and state health officials. Elevated body temperature or subjective fever or symptoms, including severe headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage, AND An epidemiological risk factor within the 21 days preceding the onset of symptoms. These agencies will work with CDC to determine whether a patient is or is not a PUI, and whether testing is indicated. Patient status should be determined as quickly as possible in order to ensure that patient care is not compromised. Any presumptive positive Ebola test result must be confirmed at the CDC to inform public health decisions. If it is determined that testing for Ebola virus is indicated, at least 4 mL of whole blood collected in a plastic tube preserved with EDTA is the preferred sample for testing. To minimize risk to personnel, a site-specific risk assessment must be performed by the laboratory director, safety officer, and other responsible persons prior to receiving specimens to determine the potential for exposure from sprays, splashes, or aerosols generated during all laboratory processes, procedures, and activities. Risks should be mitigated by implementing engineering controls, administrative and work practice controls, and use of appropriate personal protective equipment PPE. Specimens for shipment should be packaged following the basic triple packaging system consisting of 1 a primary container a sealable specimen container wrapped with absorbent material, 2 a secondary container watertight, leak-proof , and 3 an outer shipping package. Strict adherence is an initial step in providing protection to personnel. Background Ebola virus can cause a severe, often fatal disease in humans and nonhuman primates. It is transmitted through contact with infected blood or body fluids e. The incubation period is usually 8â€”10 days ranging from 2 to 21 days. Patients can transmit Ebola virus once symptoms appear and through the later stages of disease, as well as postmortem. PUIs should be managed by following appropriate precautions to prevent transmission of Ebola virus to others and the hospital environment. For guidance on infection control, see CDC infection control guidance. Diagnosing EVD in a person who has been infected for only a few days may be complicated. The early symptoms of Ebola virus infection are difficult to distinguish from other, more common infectious diseases such as malaria, influenza, and typhoid fever. Ebola virus is detected in blood only after onset of symptoms, most notably fever, which accompany the rise in circulating virus. However, it may take up to 3 days after symptoms begin for the virus to reach detectable levels. CDC recommends that Ebola testing be conducted only for persons who meet the criteria for persons under investigation PUIs for Ebola virus disease. The decision to test for Ebola should be made with consultation with public health officials. In joint consultation with CDC , these agencies will assist in determining whether testing is indicated. Collecting Specimens for Ebola Testing Specimens should be obtained when a patient meets the criteria for person under investigation PUI including patients with clinical signs, symptoms, and epidemiologic risk factors for Ebola virus disease. If the first specimen is obtained days after the onset of symptoms and tests negative and the patient remains symptomatic without another diagnosis, a later specimen is needed to rule-out Ebola virus infection. For adults, a minimum volume of 4 mL whole blood is preferable. For pediatric samples, a minimum of 1 mL whole blood should be collected in pediatric-sized collection tubes. Blood must be collected in plastic collection tubes. Do not transport or ship specimens in glass containers or in heparinized tubes. Whole blood preserved with EDTA is preferred, but whole blood preserved with sodium polyanethol sulfonate, citrate or with clot activator is also acceptable. Do not separate and remove serum or plasma from the primary collection container. Transporting

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Specimens Within the Facility PPE to be worn during transport within the facility should be determined by a site-specific risk assessment, and may vary among facilities. Recommendations for PPE include disposable fluid-resistant closed lab coat, disposable gloves, covered legs and closed-toed shoes. Before removing patient specimens from the site of care, it is advisable to plan the route of the sample from the patient area to the location where it will be packed for shipping to avoid high traffic areas. Before removing patient specimens from the site of care, the outside of the specimen containers should be decontaminated with an approved disinfectant as described in Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus. After placing in a secondary container, specimens should be hand-carried to the laboratory or packing area. DO NOT use any pneumatic tube system automated or vacuum specimen delivery system for transporting specimens. Specimens collected for Ebola virus testing should be packed and shipped without attempting to open collection tubes or aliquot specimens. Opening the tubes destroys the vacuum seal and thus increases the risk of leakage during transport. Specimens for shipment should be packaged following the basic triple packaging system , which consists of 1 a primary container a sealable specimen container wrapped with absorbent material, 2 a secondary container watertight, leak-proof , and 3 an outer shipping package. For questions about packaging transportation regulations, contact the U. Packing and Shipping Clinical Specimens for Confirmation at CDC The following steps should be followed by persons certified to ship infectious substances. Email tracking number to spather cdc. On the outside of the box, specify how the specimen should be stored: CDC is available for consultation at CDC will continue to evaluate new information as it becomes available and will update this guidance as needed. Additional Resources and Information.

Chapter 3 : The Importance of Proper Specimen Collection and Handling - Lab Testing Matters

specimen collection and handling The quality of the information obtained from a laboratory test depends upon the proper collection and handling of the specimen. Correct patient preparation, specimen collection, packing and transportation are important factors in obtaining accurate results.

Telephone inquiries should be directed to: We examine specimens as carefully and rapidly as possible; however, we do not sacrifice accuracy for speed. Please consider the following information before making a telephone inquiry: Lab reporting results are given only to the original submitter. Upon receipt of the specimen at the Laboratory, most testing will be completed in one to three days; however, newborn screening tests take days. Confirmation of findings in certain bacteriological examinations may necessitate a short delay in reporting results. Submitting Specimens Please exercise care when submitting specimens and requesting tests. Services are offered only in keeping with departmental policies, licensure, and mission; therefore, services may be withdrawn in case of misuse or improper specimen submission. Submission of proper specimens under optimum conditions is very important. The Laboratory enforces the principles of Good Laboratory Practices. The submitter is responsible for ensuring expiration dating on media. We will monitor the interval between the collection and the receipt of time-sensitive specimens newborn screening, bacteriological water, gonorrhea. If a label is used, ensure that it is firmly attached to the specimen to ensure accurate identification. Guidelines for Specific Types of Specimens Serological Testing The DSHS Laboratory does not provide blood collection tubes, except for those who are under contract or are eligible under the Texas Health Steps THSteps Program; therefore, physicians should have a supply of vacuum tubes for the collection of blood specimens for serological testing. Assays will require at least 5mls of whole blood in a tube. Serum may be separated from the clot by centrifugation and transferred to a sterile tube with a screw-cap make sure that the seal is tight to prevent leakage. Pack specimens in compliance with government regulations covering the transportation of etiologic agents. To prevent hemolysis in the specimens, avoid bacterial contamination, the presence of water or chemicals in syringes or tubes, or rough treatment. Avoid extremely high temperatures, such as may occur in mail vans and drop boxes in the summer and never freeze whole blood. How to collect serum sample using serum separator tubes with clot activator: Gently invert tube 5 times to mix clot activator with blood. Allow blood to clot for a minimum of 30 minutes in a vertical position. Observe a dense clot. Centrifuge at full speed between and g for 10 minutes for swing-head unit or 15 minutes for fixed angle units. Barrier will form, separating serum specimen from clot. Transport spun tube to the laboratory. A single result is significant in a few serological tests, such as immune status testing. In many cases, single results will be more misleading than helpful. Collecting the first specimens as soon as possible after the onset of the disease is essential. Single specimens will be accepted for syphilis and HIV serology, immune status testing i. Single specimens may also be submitted for systemic mycoses when a chronic infection is underway. Often saliva only is submitted, and this is usually unsatisfactory. The Laboratory in Austin provides reference and primary culturing work in mycobacteriology and mycology. Fecal specimens for bacteriological culturing Fecal specimens for bacteriological culturing will be accepted only under special circumstances and with prior approval When approved, these specimens must be submitted in Cary-Blair transport medium. Instruction sheet and medium available upon request. Fecal specimens for intestinal parasites The examination of fecal specimens for intestinal parasites is still viewed as a reference service and will be offered to any public health clinic, but prior arrangement is required for all other specimens The specimens must not be sent in the bacteriological preservative. The Laboratory provides kits to qualified providers. Fecal specimens for viral isolation Fecal specimens for viral isolation must not be chemically preserved. Instead, fresh, unpreserved stools must be submitted. If the expected time between collection and receipt in the laboratory will be greater than 72 hours, freeze specimens after collection and ship on dry ice. Guidelines for shipping rabies specimens are as follows: Specimens must be shipped in a sealed, sturdy double container; a Styrofoam container inside a cardboard box

works well. Place completed Rabies Submission Form G-9 in a separate plastic bag to keep the form dry. Enclose sufficient absorbent material to keep all moisture within the container. Specimens should not be frozen because freezing delays and frequently compromises the examination. Use sufficient cold packs, to maintain a cool environment, even with a delay of one full day. Wet ice is not recommended. If ice must be used, double bag to prevent leakage. Zip-lock bags are recommended. State law requires telephone notification to this Laboratory before shipment of rabies specimens:

Chapter 4 : Specimen Collection, Handling and Transportation

Purpose. To provide guidance for laboratory workers on collecting, transporting and submitting specimens for Ebola virus testing. Scope. This guidance document replaces the previously posted document: "Interim Guidance for Specimen Collection, Transport, Testing, and Submission for Persons Under Investigation (PUIs) for Ebola Virus Disease (EVD) in the United States.".

Email It is a foundational principle for any laboratory test procedure that the value of the test is compromised or even negated by using specimens that have not been properly collected, labelled, handled or stored prior to and during the testing process. Microbiological tests are not as standardized as some other lab tests; the way in which a sample is processed and the results are interpreted depends heavily on the information provided with the specimen. Pre-Collection Guidelines The initial collection of samples for microbiology testing is critical, since errors that occur at this stage cannot be corrected at a later time, and since mistakes require collection of new specimens. Document that proper patient preparation prior to collection of the specimen has been done. A laboratory request form with the following information must accompany the specimen. This aids interpretation of results and reduces the risk of errors. Type of specimen and the site from which it was obtained. Date and time collected. Diagnosis with history and reasons for request such as returning from abroad specify country with diarrhea and vomiting, rash, pyrexia, catheters in situ or invasive devices used, or surgical details regarding post-operative wound infection. Any antimicrobial drug s given. Name and number of the clinician who ordered the investigation, as it may be necessary to telephone preliminary results and discuss treatment before the final result is authorized. Hands should be washed before and after specimen collection. In line with standard precautions, appropriate personal protective equipment should be worn when collecting or handling specimens. Specimens should be collected in sterile containers with close fitting lids to avoid contamination and spillage. It is not necessary to collect stool specimens in a sterile container. All specimen containers must be transported in a double-sided, self-sealing polythene bag with one compartment containing the laboratory request form and the other the specimen. Ideally microbiological specimens should be collected before beginning any treatment such as antibiotics or using antiseptics. However, treatment must not be delayed in serious sepsis. Transport medium may be used to preserve micro-organisms during transportation. Tenets of Specimen Management It is important to be knowledgeable of caveats that are relevant to specific specimens and diagnostic protocols for infectious disease diagnosis. However, there are some strategic tenets of specimen management and testing in microbiology that stand as community standards of care and that set microbiology apart from other laboratory departments such as chemistry or hematology. Ten points of importance are: The laboratory should set technical policy; this is not the purview of the medical staff. Good communication and mutual respect will lead to collaborative policies. The laboratory must follow its procedure manual. A specimen should be collected prior to administration of antibiotics. Once antibiotics have been started, the microflora change, leading to potentially misleading culture results. Specimens must be labeled accurately and completely so that interpretation of results will be reliable. Many body sites have normal flora that can easily contaminate the specimen. Therefore, specimens from sites such as lower respiratory tract sputum , nasal sinuses, superficial wounds, fistulae, and others require care in collection. The laboratory requires a specimen, not a swab of a specimen. Actual tissue, aspirates, and fluids are always specimens of choice, especially from surgery. A swab is not the specimen of choice for many specimens because swabs pick up extraneous microbes, hold extremely small volumes of the specimen 0. Swabs are expected from nasopharyngeal and viral respiratory infections Specimens of poor quality must be rejected. Microbiologists act correctly and responsibly when they call physicians to clarify and resolve problems with specimen submissions. Susceptibility testing should be performed on clinically significant isolates, not on all microorganisms recovered in culture. Microbiology laboratory results that are reported should be accurate, significant, and clinically relevant. The microbiology laboratory policy manual should be available at all times for all medical

staff to review or consult. It would be particularly helpful to encourage the nursing staff to review the specimen collection and management portion of the manual. This can facilitate collaboration between the laboratory, with the microbiology expertise, and the specimen collection personnel, who may know little about microbiology or what the laboratory needs in order to establish or confirm a diagnosis. Most infectious disease protocols have based their strategies on the management of results generated by microbiology laboratories. Getting the right diagnosis is contingent upon laboratory results that are accurate and clinically relevant. In addition to managing quality processes and the day to day operations of the lab, she developed and led a multidisciplinary task force to implement molecular testing for MRSA; she implemented a positive patient identification system via handheld computers; and helped lead the Laboratory and Nursing Process Improvement Committee.

Chapter 5 : UTMB Laboratory Specimen Collection Requirements

Specimens must be collected in an appropriate specimen container to maintain the integrity of the specimen. Test Information Sheets specify the type of container or collection kit that should be used to collect the sample.

The requested volume is an amount sufficient to allow at least two performances of the assay either singly or in duplicate. The minimum volume allows one single analysis including instrument dead volume. When temperature is not indicated, the sample may be stored and shipped in the most convenient manner for the client. Tests will be performed in the order of that priority. If the volume is insufficient to run all the tests requested, our Client Services department will contact the physician. Your care, skill, and knowledge when preparing the patient and specimen are essential to the provision of the highest quality standards for testing and services. The patient must first be properly prepared so that the best possible specimen can be collected. Next, the actual collection of the specimen must be completed. Then, the specimen should be properly processed, packaged and transported to the laboratory in a timely manner and under environmental conditions that will not compromise the integrity of the specimen. After all of these activities take place, a quality analysis can be performed. The specimen collection and handling process can be completed by you and your staff, or by referring your patient to a Quest Diagnostics Patient Service Center. Please contact the laboratory for clarifications, if needed, prior to specimen collection. Specimen requirements include information such as specimen volume, collection and transport containers as well as transport temperature. If additional information is needed for the interpretation of the test results or there are specific instructions for patient preparation, they are listed along with specimen requirements. It is critical that an adequate specimen volume is submitted for analysis. The volume requested in this directory is enough for initial analysis as well as for any confirmatory tests that must be performed. If an inadequate specimen is submitted, we may not be able to perform the initial test or required confirmatory procedures. When serum or plasma is to be submitted for analysis, it is good practice to collect a volume of blood that is 2 to 2. As an example, if 4 mL of serum or plasma is needed for a test, collect 8 to 10 mL of blood. When an inappropriate specimen or unclear test request has been submitted, you will receive notification with instructions for resolving the problem. In the event of an exposure, administer first aid immediately, notify your manager or supervisor and seek prompt medical attention. First aid includes washing cuts and needle sticks with soap and water; flushing splashes to the nose, mouth, or skin with copious amounts of water; and irrigating eyes with clean water, saline, or sterile irrigants. Specimens must be handled in a safe manner and according to applicable legal requirements or guidance. Information on safe specimen handling may be obtained from the U. In handling human specimens, the goal is to protect health care workers and ancillary staff such as transportation as well as the general public from exposures to blood and to other potentially infectious body fluids. Besides following other specimen preparation procedures included in this section, customers should, prior to sending a specimen to Quest Diagnostics, ensure that there is no leakage from or visible contamination outside the specimen container and that there are no needles or other sharps in the package that could cause injury or pathogenic exposure to anyone handling or opening the package and inner containers. Quest Diagnostics reserves the right to refuse to accept any transports that pose a safety hazard to its employees. The best analytical techniques provide results that are only as meaningful as the quality of the specimen that has been submitted for analysis. Our goal is to provide you with the most useful diagnostic information possible. If you have questions about patient preparation for any test, please call Client Services for further assistance. Non-fasting specimens often contain fat particles that can interfere with many analytical procedures. Fasting is defined as no consumption of food or beverage, other than water, for 9 to 12 hours before testing. On occasion, patient age will assist the technologists in choosing the appropriate initial sample dilution for the assay. Special small conical tubes with screw caps are provided to prevent evaporation of small volume samples. These tubes will hold up to 1. Standard specimen transfer tubes should be used for larger volume samples. For urine specimens, use urine

vials. Contact Client Services for information about supplies provided by Quest Diagnostics. We generally request 1 tube per test to avoid delays in processing and to expedite turnaround time. To minimize specimen volume requirements for small children, however, only one tube is required even when multiple tests are ordered. For pediatric specimen tubes, wrap the label around the tube just below the screw cap so the ends of the label adhere to each other and the information stipulated above can be read. Please place one of these labels in a blank area of the Test Request Form. The Test Request Form, properly filled out and labeled, should be folded and inserted in the pediatric specimen bag. The most common are the Glucose Tolerance Tests where the patient drinks a solution containing glucose, and blood specimens are obtained before and at various times after the drink, to measure the concentration of glucose in plasma or serum. Children ingest an amount of glucose proportional to their body weight 1. Specimen Labels All specimens should be labeled at the time of collection with at least two patient identifiers. The second patient identifier may be one of the following: Location-based identifiers are NOT acceptable, e. When using an electronically generated Quest Diagnostics test requisition, place the label lengthwise on the tube. When submitting a specimen in a container other than the tube used to draw the sample e. When submitting specimens for microbiological testing e. Test Requisition Specimens must be accompanied by a paper requisition, prepared either by hand or printed from an electronic ordering system. The requisition, at a minimum should contain the following information: Adequate patient identification information e. Select the tests to be performed. When ordering tests in a series e. Use one test requisition. Write the number of specimens on the test requisition. Submit all specimens within a series together in one specimen bag. Improperly labeled specimens will be rejected. Ensure that all specimen container caps and lids are properly tightened to prevent leakage. Properly complete the requisition. Collect the specimen s and transfer to a proper transport container, if needed. Double check the specimen container to ensure that the device is not beyond its stated expiration date. If using a manual test requisition, remove a -self--stick label from the bottom of the pre-printed paper test requisition and affix this label to the specimen transport container. Place on the container so that the label does not cover the handwritten patient name. Retain the second copy for your files. The specimen transport bag has two pouches. Place the specimen container s in the front pocket. Insert the requisition into the rear pocket with the bar code visible in the bottom corner of the bag. Frozen specimens should be transported in plastic -screw--cap containers only. Frozen specimens must be placed in a separate specimen bag along with a separate test requisition. Frozen specimens cannot be split for other tests. If more than one test is ordered on a single frozen sample, we will call you to authorize which of the tests ordered you want performed before testing can proceed. Remove the protective strip and seal the specimen bag. The protective strip must not obstruct the bar code. This will protect the test requisition from leakage and help ensure that the patient information can be entered directly into the laboratory computer by scanning of the bar code. These boxes are available from the local laboratory See the Transporting Specimens to Quest Diagnostics section. Please inform Quest Diagnostics prior to, or at the time of our Logistics Representative -pick--up, so that proper transport arrangements can be made. Any updates to these guidelines or to the specimen transport supplies will be communicated through your local Quest Diagnostics sales representative or Logistics Representative. Quest Diagnostics will provide a lock box for specimens awaiting -pick--up by a Quest Diagnostics Logistics Representative. However, customers are responsible for the security of specimens prior to -pick--up. We recommend that the lockbox be placed in a location that is not subject or exposed to extreme temperatures Frozen Specimens Frozen specimens must be transported in insulated containers surrounded by an ample amount of dry ice to keep the specimen frozen until it reaches the laboratory. Thawed specimens are unsuitable for analysis. In the event a thawed specimen is received, you will be asked to resubmit an adequate specimen. If you would like more information about sending specimens to Quest Diagnostics, please contact your Client Service Representative. Do not send medical waste as a diagnostic specimen since it may violate the law and create a health hazard. Properly discard used needles or other sharps prior to transport. Please note for tests requiring the submission of syringes, the needle must be removed and the syringe capped before sending to the laboratory. Ensure that

there is no leakage from or visible contamination outside the specimen container. Infectious Substances In , the U. The amendments to these regulations can be found at 71FR Those needing to transport infectious substances should check with the DOT, the U. Centers for Disease Control CDC or public health authorities to determine classification of the specimen and, correspondingly, how the specimen should be packaged for transport. Fungal specimens should be submitted in a screw-cap agar slant of Sabouraud Dextrose agar. All tubes must be appropriately labeled, tightly capped and sealed with tape or parafilm. Do not submit bacterial or fungal cultures on petri dishes. Place each isolate to be transported in a separate Tape Seal 95kPa Specimen Transport Bag with the absorbent material. It is important to use a separate bag for each isolate.

Chapter 6 : The Basics of Specimen Collection and Handling of Urine Testing

improper specimen collection, specimen processing, or specimen transport. Test results from all laboratory disciplines can be affected by hemolysis, especially chemistry. Immediately after collections gently invert specimen tubes with clot activator 5 times to ensure the.

Chapter 7 : Specimen Handling - Mayo Clinic Laboratories

Proper specimen collection and handling is an integral part of obtaining a valid and timely laboratory test result. Specimens must be obtained in the proper tubes or containers, correctly labeled, and then promptly transported to the laboratory.

Chapter 8 : Specimen Handling : General Guidelines

Laboratory urine specimens are classified by the type of collection conducted or by the collection procedure used to obtain the specimen. Random Specimen This is the specimen most commonly sent to the laboratory for analysis, primarily because it is the easiest to obtain and is readily available.

Chapter 9 : Texas Department of State Health Services - Guidelines for Specimen Collection and Submiss

Proper sample collection and handling is an integral part of obtaining a valid and timely laboratory test result. Specimens must be obtained using proper phlebotomy techniques, collected in the proper container, correctly labeled (in the presence of the patient) and promptly transported to the laboratory.